THE CHEMIST AND DRUGGIST

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Editorial Notes.

OUR Diary for 1872 is in course of preparation, and we believe it will, more perfectly than ever, fulfil the requirements of chemists and druggists as a desk companion for the year. Guided by past experience, and by the friendly criticism of many who have made use of the previous issues of this work, we have decided to produce it in a new form altogether. The former issues have been too large for the pocket and not large enough for the desk; the next, therefore, will be printed on pages the same size as the CHEMIST AND DRUGGIST itself, and thus a very much larger diary surface will be presented; and when the year is completed, our subscribers may, if they think fit, bind up the diary with the volume. We shall combine with it literary matter of special value to chemists, of which fuller particulars will be announced hereafter. The lowest price will be, as heretofore, one shilling, and we confidently hope that the trade will support us by using "The Chemists' and Druggists' Diary" for their memoranda during 1872.

THE commencement of the next session of the Pharmaceutical Society, on the evening of October the 4th, will be signalised by an address to the students from Mr. JOHN MACKAY, of Edinburgh. An eloquent speaker, an accomplished pharmacist, and a warm-hearted, earnest man, Mr. MACKAY will not fail to interest and profit his audience. This is the orthodox time, at the commencement of the winter session, to write a few words to students. We prefer to wait until next month, and then we hope to report in full, for the benefit of those many pharmaceutical students who will have no opportunity of hearing them, the encouraging thoughts and words which we expect from Mr. MACKAY.

THE New York druggists, and especially the best among them, are, not unnaturally, somewhat bitter against the new law which has just come into force, with respect to the examinations of all engaged in dispensing. This law, which has been several times referred to in this journal, applies only to New York city. It provides that after six months from the date of the organisation of the board, any person attempting to act as a druggist without having the certificate of this board shall be fined not more than 500 dollars, or imprisoned not longer than six months, or both. This is rather a rough way of treating men who have conducted business for many years, and have, perhaps, in earlier years, given abundant proof of scientific competency.

The appointments to the board of examiners rests with the mayor, but it is stipulated that his nominees shall consist of one skilled pharmaceutist, one practical druggist, and two regular physicians of the city. These hold their position at his (the mayor's) pleasure. Their salaries have been fixed at 2,500 dols. per annum each, and they have a secretary extra at 2,000 dols. The board was organised on July 20th, and is now in full swing. Dr. Ogden Doremus (president), and Dr. C. M. O'Leary are the physicians appointed, and Messrs. William Graham and Theobald Frohwein are respectively the skilled pharmaceutist and the practical druggist, though what the exact difference of the distinction may be it would be difficult to say. The New York Legislature is probably unaware that, etymologically, the two titles are exactly synonymous. The fees for certificates have been fixed as follows: Druggists and drug clerks, 30 dols.; prescription clerks, 10 dols. The number of licences and probable amount of fees is estimated thus:

Druggists, 438—Licences	dols. 13,149
Drug clerks, 114—Licences	3,420
Prescription clerks, 657—Licences	6,570
Fees for Diplomas, etc.	67
Total	dols. 23,197

Thus the first six months' work will provide almost enough capital for two years' salaries, though it should also be added that the four examiners will find it rather stiff work to properly examine 1,209 men in that space of time in the prescribed programme, which is Chemistry, Poisons and their Antidotes, Practical Pharmacy and Officinal Botany, Materia Medica, Prescriptions, and the Adulterations of Drugs. The official notice of this examination has been advertised in both English and German, and in the translation the foregoing list of subjects has suffered considerably.

"Practical Pharmacy" has become "Practice of Medicine" (praktische Heilkunde), and we have besides Botanical Drugs and the making of Drugs. It is reported that thus far about one third of the applicants for examination have failed to secure their certificates, and if this be true, presuming that the examinations have been fair, it is some proof that they were needed, especially considering that the applicants hitherto have all been the druggists themselves. It is possible that the clerks will cut a more handsome figure. The American journals themselves seem puzzled to know the difference between "drug" and "prescription" clerks, or why so much difference should be made in the fees. To English druggists just fresh from a successful contest with the Governmment, it will seem rather singular that the New York trade should submit so quietly to what will be to many of them a very serious commercial injury.

THE following is from a speech recently delivered by Baron Liebig at a meeting of the Royal Bavarian Academy of Science. The first sentence of the extract does undoubtedly express the aspiration of many earnest men, but it is hardly a statement of simple fact. The great chemist says:—

"The Academy seizes this moment to declare openly that there exists no national hatred between the German and Latin races. The peculiar character of the Germans, their knowledge of languages, their acquaintance with foreign people, the past and present state of their civilization, all tend to make them just towards other peoples, even at the risk of often becoming unjust towards their own, and thus it is that we recognize how much we owe to the great philosophers, mathematicians, and naturalists of France, who have been in so many departments our masters and our models. I went forty-eight years ago to Paris to study chemistry; a fortuitous circumstance drew upon me the attention of Alexander Von Humboldt, and a single word of recommendation from him caused M. Gay Lussac, one of the greatest chemists and physicists of his time, to make to me, a young man of twenty, the proposal to continue and finish with his co-operation an analysis which I had commenced. He introduced me as a pupil into his laboratory; my career was fixed after this. Never shall I forget the kindness with which Arago and Thenard received the German student, and how many compatriots, physicians, and others, could I not name, who, like myself, gratefully remember the efficacious assistance accorded to them by French men of science in finishing their studies. An ardent sympathy for all that is noble and grand, as well as a disinterested hospitality, form some of the most noble traits of the French character."

ON a succeeding page will be found a sketch of the pharmacy of South Germany, and our correspondent has added to his article some particulars of an agitation for free trade, which for some years has proceeded among certain classes of German apothecaries, and also some extracts from the defence made by those whose interest it is to maintain the same footing which now exists. The author of the paper has rightly judged that the violent abuse of English pharmacy, and the suggestion of a still deeper depth beyond the Atlantic, will interest and amuse our readers. With regard to this abuse it is only fair to allow that the chemists in possession have such a considerable interest in hugging their chains, that none can wonder if the charms of free trade are not so evident to them as they might be if abstract consideration alone ruled; and some slight luxuriance of imagination in their illustration of its action in this country must also under the circumstances be excused. But in defence of free trade as a principle applied to any commercial pursuit, and in defence of British pharmacy, which as is our national custom, is far more often assailed than praised by our own writers, we have this to say. That notwithstanding many shortcomings and many excrescences, there is a vigorous vitality about Anglo-Saxon pharmacy, as illustrated in these islands and in America, for which we have to thank that very free trade which many foreigners and some Englishmen think so very dreadful. By free trade in pharmacy of course is to be understood merely the free competition of as many educated pharmacists as choose to pass their examination. The surroundings of a German apothecary undoubtedly offer the utmost opportunity and inducement for scientific investigation; and it is not to be denied that these are very extensively taken advantage of. But the surroundings of an English pharmacist, the sharp competition in every department of his trade, and the growing necessity for both commercial and scientific acquirements on his part, wake up his every faculty, and the result is that he becomes not only a smarter business man, but as a rule an equally skilled pharmaceutist with one of a similar position on the Continent. The last assertion may be questioned, but a little reflection will show that though the free-trade system must allow the existence of many chemists and druggists not up to the Continental standard, it, nevertheless, does produce, both in England and America, as many first-class men as under the most rigorous system of limitation, and it also produces businesses more extensive, the success of which is founded on a far more satisfactory basis than Government protection—founded, that is, on public confidence and esteem. It is not fair, in comparing our pharmacists with those of other countries, to allude to the most uneducated in our ranks, and to point out that there are none such abroad. Let the pharmaceutical aristocracy of both systems be examined, and even in this field free trade will not suffer by the side of Government limitation.

THE homœopathists have at last gone too far. They have sprinkled their believers about in all the influential professions of the country, and the present decay of Great Britain is possibly due to the working of the leaven of their pernicious doctrines. Believers in globules are to be found in Parliament, in the church, in the army, navy, and volunteers, on the bench, and at the bar. It is not unlikely that some of them are in heaven; but this question is now under investigation, and we shall not anticipate the revelations of psychic force. But Hahnemann, like Haman, has now met with a Mordecai who will not bow to him. "His steps are not upon our paths, our fields Are not a spoil for him." The gates of the pharmaceutical Paradise will not open to the pleading Peri who stands without. At the last meeting of the Pharmaceutical Council, two homœopathic chemists were proposed for membership, and by six votes to five they were rejected on account of their homœopathy. We print elsewhere the report of the discussion which took place concerning these two gentlemen, from which it will be seen that a chief objection to their election seemed to be that an element of discord might be introduced thereby. It would certainly be a pity to disturb the perfect harmony which has hitherto existed, on the poison question for instance, but one can hardly recognise the wisdom—not to mention the justice—of the ostrich-like proceeding of burying one's head in the accumulated sand-heap of our own formulæ, and refusing to acknowledge even the existence of any other sand-heap.

We have received a circular announcing the formation of a society called the Metropolitan and Provincial Association for the Defence and Advancement of Trade Interests. The President is Mr. W. H. Smith, M.P.; Mr. Mechi, and four other first-class West-end tradesmen are the Trustees. The Committee consists of thirty gentlemen, all of these also being in business at the West-end of London; and Mr. Arthur A'Beckett, lately the editor of the *Tomahawk*, is the Secretary. Among the names on the Committee the following are very familliar to our readers: Mr. Blackwell (Crosse and Blackwell), Mr. Butler (Hedges and Butler), Mr. Carteighe (Dinneforde and Company), Mr. W. Dickinson, Bayswater, and Mr. Savory (Savory and Moore). One of the declared objects of the Association is to make war with the Civil Service Co-operative Stores, and "amongst other important matters which will be undertaken in the interests of tradesmen, will be the watching and supervision of bills introduced into Parliament, the promotion and support of measures in Parliament calculated to further trade interests, attending to various parochial matters and measures, and the advocacy through the press and other mediums of the rights and interests of traders generally." This reads sonorously, but it is vague nevertheless, and though we are well aware of the advantages of union, we are not quite so certain that the interests of various classes of tradesmen would be sufficiently identical to enable such an association to work successfully. Certainly, provincial tradesmen can hardly be expected to subscribe their guineas, if the constitution of the Society makes it appear to be simply and exclusively an association of West-end houses.

A correspondent of the *Lancet* (August 26th), signing himself "An Army Surgeon," tells a story which will interest pharmacists, whether they regard its substance as fact or fiction. The reader will notice the charming vagueness as to dates and places which so frequently distinguishes these narratives. The army surgeon was "waiting for the last train down at a certain station, when one of the ladies of our party was taken so ill that I went with her brother to get a draught made up for her. Ringing the bell of a chemist's shop near the station, I inquired if I could have a prescription made up; and on being answered in the affirmative, I asked for paper to write it on. The owner of the shop inquired who I was, and on stating I was an army surgeon, he asked me if I would make it up myself, saying that the fact was he devoted himself to the classics, and knew very little about medicines! Taking up a measure, I asked for sp. ammon. arom., and he handed me *liq. ammon. fort.* I asked for something else, and he handed me a bottle of poison, the name of which I forgot in the hurry to get back for the train. The last bottle had the name of the article I wanted plainly marked on the bottle, and a very small label at the bottom indicated the real contents. Ordinary medicines and poisons were mixed together on the same shelf. Had I not carefully looked at and smelt the different articles, or had I merely sent the prescription by a non-professional hand, in which case the man would most likely have attempted to make it up himself, the young lady would in all probability have been dead now, and a jury would have given a verdict of death by inadvertency." We have tried hard to believe in the *dramatis personæ* of this narrative, but find it hopeless; the classical chemist, the courageous army surgeon, and the still more courageous young lady who took the medicine, and whose life depended, not on a thread, but on the accuracy of the army surgeon's sense of smell. The only rational explanation of the narrative is that there was a refreshment bar at the "certain station," beyond the reforming reach of Spiers and Pond. "While waiting for the last train" the army surgeon and the young lady must have regaled themselves with a sausage roll and a glass of sherry each. Mark the different result. She suffered indigestion only. He went through the horrors of nightmare, succeeded by prostration and *cacoëthes scribendi.* This theory accounts for all, but over such a foundation it was hardly fair on the part of the editor of the *Lancet* to float the streamer "Poison Regulations Wanted."

The Petroleum Act of 1871, which has now passed into the statute book, is only to be regarded as a temporary bridge. It is to continue in force until the 1st of October, 1872, and no longer. This provision is made so that in the meantime a conclusion may be arrived at as to an exact and satisfactory mode of testing the flashing point. Everybody agrees that the plan employed at present is not satisfactory. At a recent meeting of the trade many cases of most wide divergence of results were reported. For example, one gentleman stated that he recently had some petroleum which was certified by the Petroleum Association at 104°. He took it to a chemist, and got it examined and tested. The chemist returned it at 88°. He then took it to the Board of Works, and they said they made it 86°. Wholesale firms also complained that petroleum which they sent out at 104° and 106° were often returned by some of the country inspectors at 94° and 96°. A definite means of testing would, therefore, be welcomed by the trade as readily as by any one, and for that purpose it was decided to substitute closed vessels for open ones. According to excellent authority, a difference of 15° was sufficient to establish a correspondence between the two systems, that is to say petroleum which would flash at 100° in an open vessel would flash at 85° in a closed vessel. This at first satisfied the Government, would have satisfied the trade, and was based on such careful experiments that it ought to have been sufficient to satisfy the public. But at this point some other chemists, hungry for fame, rushed in with their statements that 20° and even 25° would not more than restore the equilibrium, and this upset everything. The consequence is that the testing is to be carried on as before until October, 1872, and in the meantime it is expected that a committee will be appointed to investigate the matter. The remaining provisions of the Act are as we summarised them in our July number. The most important to chemists is the permission to keep petroleum without a licence for private use or for sale, provided the following conditions are complied with:—

"1. That it is kept in separate glass, earthenware, or metal vessels, each of which contains not more than a pint, and is securely stopped.

"2. That the aggregate amount kept, supposing the whole contents of the vessels to be in bulk, does not exceed three gallons."

DEATH OF MR. FLOCKHART, OF THE FIRM OF DUNCAN, FLOCKHART AND CO.

Many of our readers will learn with deep regret, that Mr. William Flockhart, of the firm of Duncan, Flockhart and Co., Edinburgh, has been suddenly taken from us.

Mr. Flockhart was born at Annacroich, on the shores of Loch Leven, Kinrosshire, in the year 1808. Nearly half a century ago, he left his native place and came to Edinburgh, where he was apprenticed to Mr. Duncan, who by his energy and perseverance, had already established a large business. Shortly after his apprenticeship expired, he was assumed as a partner by Mr. Duncan, who early noticed his abilities and remarkable capacity for business, and in this way was the firm of Duncan and Flockhart formed, now so well known not only in Scotland, but throughout the country generally. During the course of his apprenticeship, he devoted his spare hours to the study, not only of what more properly pertained to his business, but of medicine and surgery, and when quite a youth he became a licentiate of the Royal College of Surgeons at Edinburgh. From the time that he was assumed as a partner by Mr. Duncan, until his death, his life was one of constant and unwearied attention to business.

As is well known, the business hours in the trade were forty years ago excessively long. When he commenced business, the shop (if we mistake not) was not closed till 11 o'clock, and we have heard him say in his quiet humorous way, that when the business hours were shortened to 9 o'clock, he felt quite strange at leaving the shop so soon, and almost ashamed to be seen going home so early; fortunately more sensible ideas now prevail on this subject. By his tact and attention to business, he did not a little to raise the firm of which he was a member to the high position it has so long held. He was endowed with talents of a high order, which, combined with great common sense and prudence, made him an excellent man of business. He had considerable humour and a great store of anecdotes, which he could apply very happily as occasion arose. He was a warm-hearted friend, and most agreeable companion, and those who enjoyed his intimate acquaintance will long mourn his loss. He was always too much engrossed with his private duties to take any special interest in municipal or political affairs. Besides he was fond of retirement, and had no relish whatever for the bustle and excitement of public life.

For many years he resided at Trinity, one of the suburbs of Edinburgh, where he devoted his spare time to the cultivation of his garden, with him a favourite occupation; and for some years back he has farmed the small estate on which he was born, and which belonged to him at the time of his demise. He was no mere amateur farmer, but entered with great zest into agricultural pursuits, in which he showed no inconsiderable skill. He was simple in his tastes, unostentatious in his style of living, a liberal contributor to many of the benevolent institutions of Edinburgh, and was eminently one of those of whom it might be said that they

"do good by stealth,
And blush to find it fame."

Two years ago symptoms of an alarming character showed themselves, and it was at that time feared that he would not recover. After a lengthened illness, however, he got better, and since then, although symptoms of the disease were occasionally shown, he enjoyed comparatively good health.

In the beginning of July, he left town with his family to spend his annual holidays at Annaeroieh, and until within a few days of his death, he appeared to be remarkably well and cheerful, but the day previous, the 23rd of August, he took a short walk, came home exhausted, and died next morning about 10 o'clock perfectly conscious till his end. He will be much missed, not only in his own home where his widow and two children mourn him, but also by a large circle of friends both in Edinburgh and Kinross, where he was deservedly held in the highest respect and esteem. He died in the house in which he was born, and the gentleman who had registered his birth, and had been his teacher, has also registered his death. He is also survived by his partner Mr. Duncan, who, two days after Mr. Flockhart's death, entered the 92nd year of his age.

The Messrs. Newbery, whose removal from St. Paul's Churchyard to Newgate-street we noticed last month, have made a very handsome place of business of their new premises. Each floor has been carefully arranged for the patent medicine business in accordance with the requirements which the experience of the managers has shown to be desirable, and the arrangements seem to be very near perfection. The present proprietors of the business and their ancestors have held the same place of business in St. Paul's Churchyard for 125 years.

THE LIBRARY OF THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

ROYAL CHARTER, 1599.

Two Notices by Joseph Inee.

[*I have been assisted in this sketch by Mr. John Cargill Brough.*]

I.

MYREPSUS.

SOME months ago I saw an address delivered in Glasgow by Mr. Thomas Davison. In it were mentioned two old books, "Alexis" and "Myrepsus." With the first I was familiar, but I felt it a degradation to be entirely unacquainted with the latter. On applying for information, the courteous answer was returned that "Myrepsus" or any other works belonging to the Library were at my disposal—other Glasgow pharmacists sent letters expressive of goodwill. The perusal of the volumes sent has pleasurably filled up my scanty leisure, and I can do nothing less than say a few words about some of these records of the past, hoping not only to interest Scottish pharmacists but the readers of this journal; while I must not fail to acknowledge how keenly this thoughtful kindness to a stranger has been appreciated.

THE PRINTER.

First let us gain an introduction to a celebrated family of printers. The name of the founder was Henri Estienne or Etienne—Stephanus or Stephen. He belonged to the fifteenth century. Born in Paris 1470, began to print about 1503. This household were printers from generation to generation, the men, women, and children all included. There was not one of them who at some period had not smeared thir fingers with printer's ink. They were scholars from generation to generation—men, women, and children included—the difference being, with respect to the seniors, that some knew Latin, Greek, and Hebrew, while others knew Greek, Latin, and Hebrew, as we shall see. Attention may be particularly directed to another point. Estienne the father was called Henri I. (premier); his son was called simply Robert, not Estienne, junior; but *his* son Henry, succeeding, by the natural and inevitable law of things, to the printing throne, was called Henri II. There was a royalty in literature in those days, and *these* merchants were princes.

Estienne (Stephen the First) was the original deviser of what is termed the Errata—till the adoption of that now familiar plan an incorrectly printed book was comparatively useless until it reached a second edition. He corrected his own proofs, as is here set forth: "Il revoyait lui-même les épreuves, et les soumettait ensuite aux savants qui fréquentaient sa maison. Quand, malgré ses soins, quelques fautes lui ont échappé, il en a averti le lecteur, ou les a indiquées dans un *errata* usage inconnu alors à ses frères."

This family has been accused of having divided the Bible into chapters and verses; but there is no justification for the charge, nor was it any member of the Estiennes who compelled our unhappy clergy to state once a year—"And when there was made a great silence, he spake unto them in the Hebrew tongue, saying, Here endeth the second lesson."

Robert Estienne was born in Paris, in 1503, printer and scholar. He brought out an admirable edition of the New Testament, the success of which alarmed the authorities of the Sorboune. Estienne (Henri II.), the one with whom we are concerned, was born in 1528. His trade mark was an olive tree, with many branches lopped off, bearing the motto, "*Noli altum sapere,*" to which was sometimes added *sed time.*

(The father's device was "*Plus olei quam vini.*") He was an ardent Greek scholar. After twelve years of research he brought out an elaborate Greek lexicon, but the expense of its production prohibited its sale, while an abridgment by Scapula completed its ruin. Estienne (Stephanus) led a wandering life, and in his day published many works. Being helped in his pecuniary difficulties by Ulric Fugger, he adopted the title of the printing-office of his patron. It was this Henry Estienne who, in 1567, published the Latin edition of "Myrepsus." Let us now learn a few facts about

THE WRITER.

First account, extracted from Moir's "Outlines of the Ancient History of Medicine." Edinburgh and London. 1831. 8vo.

Page 195.— . . . "From the ninth century till the destruction of the Eastern Empire the history of medicine would present a total blank, save for the not very prominent names of Jean, commonly styled Actuarius, Demetrius Pepagomenus, and Nicholas, better known under the cognomen of Myrepsus."

Page 198.—"We must now . . . say a few words of Nicholas, of Alexandria, commonly styled Myrepsus, from his having published the work on medicines which is still extant under that name. It would be as difficult to fix his time as that of Actuarius; but from his mention of that physician, as well as Mesué and Michael Paleologus, under the name of Angelus, we are led to believe that he lived during the earlier part of the twelfth century; at all events, his work must have appeared before the conclusion of the thirteenth, as Sylvaticus and Cedemontanus, the physicians of Robert, King of Sicily, whose reign commenced in 1310, both make mention of him.

"It is supposed that Myrepsus abode either at Nicæa or Alexandria; and from many passages in his writings it is evident that he was a practitioner of the healing art. His work is a sort of dispensatory, containing an account of the compound medicines mentioned by Greek and Arabian authors, and is written in a very impure and barbarous dialect of the former language." . . .

Second account, translated from the "Biographie Universelle Ancienne et Moderne"—Supplement:—

["On doit des égards aux vivants; on ne doit aux morts que la verité." Voltaire. Paris, 1844.]

"Nicholas Myrepsus, a Greek physician, was born in Alexandria, which procured him the surname of Nicholas of Alexandria.

"Professor Hecker, of Berlin ('History of Medicine,' vol. ii., p. 329), thinks, from a passage of George Acropole's, that he lived at the Court of the Greek Emperors, at Nicæa, from 1222 to 1255, while the French Emperors reigned at Constantinople. He had the title of *actuarius*, a dignity conferred on a great many members of the Faculty by the Greek Emperors. This author has left us a collection of medical formulæ divided into forty-eight sections of very unequal length, and containing two thousand six hundred and fifty recipes. He was acquainted with Arabian medicine, and that of the school of Salerno, and he compiled from every quarter recipes for his book.

"He was already advanced in life when it was published; for in it he mentions Pope Nicholas III., who reigned from 1278 to 1280.

"This author has sometimes been confounded with Nicholas Præpositus, Doctor of Salerno, who, like him, has written an antidotarium. It appears that Myrepsus profited by the work of the latter, as well as by that of Mesué, an Arabian physician."

"MESUÉ.—Ninth century; Christian of the Nestorian sect; born at Khouz, close by Nineveh. Went to Bagdad, and studied under the Patriarch Timotheus, from whom he hoped to obtain holy orders. But the great facilities offered for study and the large circle of learned men by whom he was surrounded, prevented him from returning home, and medicine became naturally the object of his choice. He founded a celebrated school, and gained the favour of the caliph Haroun Al-Raschid. He enjoyed court patronage to the last, until his death in 855 J.C., aged about eighty years."

The Greek text of the work of Myrepsus has never been printed; several MS. of it are extant in the Royal Library of Paris. But we have several Latin translations; the first, by Nicholas Rheginus Calaber, printed at Ingolstadt in 1541, is incomplete and inaccurate; the second, by Leonard Fuchs, appeared in 1549, under the following title:—

"Nicolai Myrepsi Alexandrini, medicamentorum opus. *In sectiones quadraginta octo digestum, a Leonardo Fuschio medico, è græco in latinum recens conversum, Luculentissimis que annotationibus illustratum, Bâle, 1549, in fol.*"

This translation has often been reprinted, as, for instance, at Lyons, 1550, in 8vo.; at Venice, 1551 and 1602, in folio at Paris, 1567, in 8vo.; at Nuremberg, 1658, in 8vo. It occurs also in the Medicæ Artis principes post Hippocratem et Galenum of Henri Estienne.

THE BOOK.

The copy in the Glasgow library is imperfect; the complete edition is as follows:—

Medicæ artis principes post Hippocratem et Galenum.
Græci Latinitate donati.
Aretæus.
Ruffus Ephesius.
Oribasius.
Paulus Œgineta.
Aetius.
Alex. Trallianus.
Actuarius.
Nic. Myrepsus.

Latini.
Corn. Celsus.
Scrib. Largus.
Marcell. Empiricus.
Alii que præterea, quorum unius nomen ignoratur.

Index non solum copiosus, sed etiam ordine artificioso omnia digesta habens. Hippocr. aliquot loci cum Corn. Celsi interpretatione.

Henr. Stephani de hâc suâ editione tetrastichon.

Quærere quos ægri per compita multa solebant
Hospita nunc per me est omnibus una domus.
Prima salutiferæ medicorum gratia dextræ
Sistenti medicos nonne secunda mihi?

Excudebat Henricus Stephanus, illustris viri Huldrich Fuggeri typographus.

The title page of Myrepsus recommends the work, omnibus tum medicis, tum seplasiariis mirum in modum utile—(*i.e.* useful as well for the medical profession as for seplasiarii). This is a fair illustration of the extreme difficulty of understanding this book: originally written in colloquial Greek and translated into Latin, the two languages are intermixed in a most perplexing manner, and the chapters are crowded with obsolete expressions. The seplasiarius was a dealer in ointments.

Festus says in Seplasia—"Seplasia forum Capuæ, in quo plurimi unguentarii erant, cujus meminit Cicero."

Hence seplasium means unguentum, and the seplasiarius was the man who dealt in ointments.

This class of illustration might be multiplied *ad infinitum*

—the headings of the chapters presenting the chief difficulty. De *Epomphaliis* treats of plasters to be laid on the navel, while De Drosatis treats of syrups.

We meet with a dissertation De Hedricis. That in Myrepsus means something best left untranslated. "Hedricum hoc est quod sedi adhibetur, et tentiginem facit, atque ad uterum exulceratum utile est. The correct word is Hedychrum—*i.e.*, ἡδύχρουν, a fragrant ointment such as would have been patronised by Madame Rachel.

We then meet with four chapters—

1. De Eligmatis.
2. De Propomatis.
3. De Psilothris.
4. De Smegmatis.

The meaning of which terms is thus explained :—

Eclĭgma, ătis, n. (ἔκλειγμα, from ἐκλείχω, delingo, lambo, lambendo evacuo, etc.), *an electuary, jelly;* thymum—in eclīgmate faciles exscreationes facere cum aceto et sale, Plin. H.N. xxi. 21. post in. § 89 : pix execreationes pectoris adjuvat ecligmate, ib. xxiv. 7. post in. § 23 : sumitur (anagallis) et ecligmate ad pectoris vitia cum melle, ib. xxvi. 8. ante med. § 35.

Prŏpŏma, ătis, n. (πρόπομα), *drink taken before eating;* Pallad. Feb. 32, in the title.

Psilōthrum, i. n. (ψίλωθρον). I. *An unguent, by means of which the hair falls off, and so the skin becomes smooth*; Martial. vi. 13, 9; also, *any means of removing the hair and making the skin smooth;* lacryma hederæ psilothrum est, Plin. H.N., xxiv. 10, med. § 47 : amerinæ (salicis nigræ) semen cum spuma argenti—illitum, psilothrum est, ib. c. 9, post in. § 38; cypero vis medicinæ psilothri (est), ib. xxi. 18. med. § 70; psilothrum est thynni sanguis, fel, jecur, ib. xxxii. 10. post med. § 47; ranæ parvæ—sanies efficacissime psilothrum est, si recens illinatur, ib. : hence, II. *An herb, otherwise called* ampelolence; Plin. H N. xxiii. 1. post med. § 16, because it makes the skin smooth.

" Smegma, ătis, n. (σμῆγμα), *an abstersive or purifying medicine ;* si vero cælesti aqua discoquantur (lupini) succus ille smegma fit, quo fovere gangrænas, eruptiones pituitæ, ulcera manantia, utilissimum (est), Plin. H.N. xxii. 25. post med. § 71 : item mastiche lentisci replicandis palpebris et ad extendendam cutem in facie et smegmata adhibetur, ib. xxiv. 7. prope fin. § 28 : thus plur. smegmatis occurs, ib. xxxi. 7. prope fin. § 42, and c. q. extr. § 45. ed. Hard., where earlier editions—*e.g.*, Elzev., etc., have smegmaticis in both passages.

I must not conclude without giving a general specimen of the author; the first section will suffice.

Sectio I. De antidotis ad varios morbos, containing about twelve columns folio. Each chapter has a running Latin commentary by Fuchius, chiefly explanatory of the original Greek. An instance may be given. *Carnabadii* figures in the Golden Antidote of Alexander. Note.—" Carnabadi animadvertendum, Nicolaum per καρναβαδι et καρναβαδιον intelligere cuminum Œthiopicum ut satis liquet ex Antidoto 406, ubi metipse carnabadium interpretatur pro cumino Œthiopico. Symeon Sethi, et alii quidam recentiores Grœci, carnabadium appellant caroum ut in secundo nostro De Stirpium historia commentario docuimus. Atque hinc est quod Latini codices Nicolai pro carnabadio habeant carei. Errant igitur qui carnabadium pro doronico interpretantur." In this elaborate manner the commentary proceeds, fully establishing the meaning of the old term, "a painful preacher."

Sagapenum Grœcè est σεραπίωνος. Nicolaus enim sæpe barbara hac voce ubitur pro liquore qui veteribus Grœcis σαγάπηνον dicitur. This gives the key to the interpretation of many other sentences. Myrepsus is said to have written in *barbarous Greek;* those who followed in his wake copied his expressions. Moreover, some embarrassment occurs in the manuscript, in consequence of the adapter of Myrepsus transposing Latin terms in Greek characters; κασιας φιστουλα for Casiæ fistula being one of numerous examples, The third Antidote includes myrrh, with regard to which says the commentator: " Grœcus manuscriptus codex legit μήρα sed perperam. (I shall consider it to mean myrrh). Scribendum enim erat μύῤῥα quod Latinam vocem Grœcis literis Nicolaus pinxerit. Græcè namque dicendum erat σμύρνης."

I can assure the reader that I have carefully gone over the mass of antidotes enumerated. They are in number five hundred and eleven. They are not worth transcribing, though they contain abundant matter for students curious about old Latin construction. In general they are heaped up with ingredients : one of the simplest is modestly described as follows :—Cap. VII. " Another Antidote of Adrian, efficacious in all diseases. He takes of lettuce seed, henbane seed, and opium, of each half an ounce; anise (apii ?) and fennel seed, of each one ounce; honey or sugar, a sufficient quantity. Dry, powder, and (cretis ?) then exhibit." The opium is the essential, but it did not cure even in the thirteenth century all the evils to which flesh was heir.

But if we pass over these old books with a smile at their fantastic arrangement, and think them devoid of interest, we shall be poor interpreters of the past.

At least Chapter VIII. contains a most sensible Antidote, over which the pharmacist of this day might ponder.

Antidotus acharistos : the Unthanked for Antidote. It is thus explained. So called on account of the quickness with which it secures relief. For those who are quickly cured are ungrateful towards their medical advisers, just in proportion as sudden relief is less esteemed in dangerous cases.

Drosatum : δρόσατον is identical with the *Serapium* of Actuarius, and the modern *Syrups.* Thus σαχάριτος καὶ δροσάτου τῶν ρόδυώ is rendered in Latin sacchari et syropi rosarum.

Sectio secunda. De Salibus, includes the Salt of the Holy Apostles, and the Salt of the Holy Apostle and Evangelist Luke. The last nostrum has marvellous powers; it preserves the eyesight up to old age, it prevents coughing and difficulty of breathing, and its composition is so varied that probably its virtues may be true.

So farewell Myrepsus, companion of many happy hours. Next month I leave this Latin version "of a barbarous Greek manuscript," and I have to say something, though not much, about a German-Latin chemist and some old world French. I can hope but for the scantiest audience. Nevertheless, by anticipation, I personally thank many pharmacists at Glasgow, and the excellent Librarian of the Faculty, Mr. Hugh Miller, for the intense pleasure they have lately placed within my reach.

SMALL-POX IN CHINA.

BY F. PORTER SMITH, M.B. LOND.

THE present epidemic of small-pox in England seems to carry us back to a period in the history of this plague of the human race for which we have had to look hitherto to the contemporaneous condition of countries representing much earlier phases of the history of this disease, and the measures connected with the prevention of the malady as a recurrent pest. For the future, we would suggest that this malady, whatever may have been the grounds of its previous insignificant cognomen, should be promoted to the dignity and style of the "great-pox."

Small-pox is called the "bean disease" in the Chinese language, from the resemblance of the vesicle to a small bean or some other form of pulse, a kind of food very largely grown in China. The disease dates from the reign of the first Emperor of the (Eastern) Han dynasty, Kwang Wu, who reigned A.D. 25—28. It is said to have been imported from some portion of Central Asia, or from some part of South-western China now included in the nominal empire, by some Chinese troops returning from a foreign campaign. This adds another instance to the important list of diseases propagated by armies in ancient and mediæval times. Inoculation has been practised amongst the Chinese for a thousand years or more, showing that the disease must soon have clamoured for some interference, even at the hands of an Eastern people, strong in their belief in fatalism. This latter failing is attested by the facts that the disease is called the *Tien-hwa*, or "heavenly flower," and that the malady has been deified under the name of "Holy Mother of Small-pox." Temples are erected in every part of the empire in honour of this goddess, and every family visited by the disease sends some worshipper with offerings to the shrine of this old hag.

In order to avoid any offence to her, the disease, one of the most horrible of all afflictions, is spoken of as the "felicitous circumstance," or some other periphrastic or propitiating term. The earliest work on the disease is a kind of treatise called "Wan-jin-shi-tau-chin-lun," first published in 1323. Several other works have been written on the disease; some on inoculation. It is curious that in Chinese the malady is called *Hwa*, the "flower," the equivalent of the word *exanthema*.

The Chinese believe that the small-pox can be diminished in frequency and severity by a judicious system of diet on the part of the expectant parents of children, and by the adoption of a regimental regulation of the habits, feelings, etc., of those who wish to produce a progeny free from such morbid proclivities. From some of the remarks on this point it is evident that hereditary syphilis must have been confounded with small-pox. The early history, in particular, of this epidemic disease has been much mixed up, as well, with that of plagues and pestilences akin to those of Europe in the middle ages. A later importation of the disease from Europe is said to have occurred, but without much proof. The Chinese inoculate at the spring and winter, but the latter is the time preferred by the general population for undergoing the perils of this mischievous and unsatisfactory substitute for the Jennerian operation of vaccination. The pustule from the small-pox patient is introduced in the dried state into the nostril of the person to be infected with the secondary disease, as one of the methods of inoculation. By the regular practice and repetition for ages of this operation, the small-pox has undoubtedly been robbed of some of its primal virulence. But this has been done at a fearful cost, for now and then the very worst forms of the disease are met with amongt the cases of inoculation, or in the neighbourhood of such carriers of the pestilence. Frightful pitting, horrible cicatrices resulting from loss of tissues by sloughing, and blinded eyes prove the futility of such a compromise with this enemy of the human race. Not until 1805, when Alexander Pearson, a surgeon of the Honourable East India Company at Canton and Macao, introduced the practice of vaccination amongst the natives of these two Chinese towns, did the Celestials begin to do battle with the "heavenly flower" at all successfully. Sir George Staunton translated a small work on the practice of vaccination, written by Pearson, and it was published in 1805, with the title of "Tai Si Chung Tau K'i Fah," or "The Wonderful Method of Inoculation from the Great West." This is now a rare tract, but has been the means of extending, very gradually, over the whole empire of China a knowledge of the subject. More has been done by Cantonese pupils of Pearson, who, having learnt the practice from him, have in turn had their own disciples. The practice is a money-getting one. The origin of the theory and plan as from foreign shores has been carefully suppressed; and as the Cantonese are a roving and enterprising race, the operation is performed everywhere. The temples are often turned into vaccination stations, and a regular announcement is made of the days for attendance. Subscriptions are raised by the people of the tything to pay the expenses, and the whole thing looks well for what is called heathenism. Private practitioners make a speciality of the operation, just as they do of the small-pox itself and the measles. Four or more punctures are made in the arm with a rude lancet, and the lymph is taken from a fresh arm. The course of the vesicle is somewhat shorter, and much less satisfactory than in European practice; and a large proportion of the cases professed to be vaccinated fail to show any cicatrix at all. A small fee is paid to the doctor on operating, and the child is seldom brought back to be seen. The virus has evidently become weak, and one of the best modes of helping on the business is to supply the most skilful operators with fresh lymph and copies of Staunton's work.

Any efforts at vaccination by foreign medical men in China are invariably met with opposition from the native Faculty, whose craft is thus endangered. Idle rumours are spread about the great demand for children's eyes, etc., and the whole scheme collapses. In Shanghai, where cases occur every year amongst the foreign community, the Municipal Council has established vaccination stations; and the native Resident Medical Officer of the London Mission Chinese Hospital attends at a station in the native city provided by the Tautai. Nothing can be learnt by us from the treatment by the Chinese Faculty of the small-pox. They give alkanet root and many other vegetable substances in the form of a decoction to bring out the eruption, an object generally secured.

Now that the telegraphic wire has connected China with England, the news of the spread of small-pox in this country must be breaking upon the Celestial mind. In a short time it may be expected that some benevolent Chinese merchant will send Chinese vaccinators to England, ignorant of the fact that we once possessed a knowledge of this forgotten art!—*Medical Times and Gazette.*

CONTINENTAL CHEMISTS.

SOUTH GERMANY.

THE position of pharmaceutical affairs in South Germany is in general very similar to that of North Germany. Several pharmacopœias are in use, but none preponderates to such a degree as in North Germany is the case with the Prussian Pharmacopœia, but it is to be hoped that in a short time all these legitimate or illegitimate peculiarities will give way to a Pharmacopœia binding for the whole German Empire, so that our country will enjoy the benefit of union not in the military department alone.

The number of chemists' businesses is proportionately greater than in North Germany. There exist 1,100 establishments for eight millions of inhabitants; that is to say, one business to about 7,000 persons. In consequence of this the returns are very small; they very seldom rise over 6,000 florins (£515); in the majority of the establishments they fluctuate between 3,000 and 4,000 florins[*] (£258-350). One-third are so small that the proprietors are not able to keep an assistant, and if they have not an apprentice at hand (which is rather difficult at present), they are compelled to attend to the business from one end of the year to the other, without even a day's recreation; while no new year brings a change or abatement of business duties to the hard-working country chemist.

In establishments which employ two assistants, the latter alternately perform the duties of dispenser and laboratory-worker, taking it each month by turns. The shop arrangements are, for the greatest part, good and practical, but somewhat plain, and without the attractive elegance of English and French establishments.

In Baden, Hesse, Wurtemberg, the Palatinate even, very small businesses are provided with a steam apparatus, or, instead of this expensive article, at least some practical contrivance is substituted, and generally brought into communication with a stove.

A favourite occupation of the South German chemists is the collecting and drying of herbs, preparing of extracts, partly for their own use, and likewise for wholesale druggists. Some chemists living in the "Allgau" manage to obtain fresh Herba Hyoscyami from Mittelfranken by nightly express trains, in order to prepare their own Extractum Hyoscyami.

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[*] One florin = 17½ silbergroschen Prussian money; 11½ florins = £1.

As regards the examinations, there is very little difference. In some universities the major examinations might be made more stringent, and at least the Note 1 (indicating that the candidate has passed with honours) reserved for really excellent scientific qualifications.

As to patent medicines, there is not so much aversion shown. The South German chemist generally takes these articles on commission, or frequently himself manufactures one or more specialities, and gives up the sale of them to some other trader.

Something that much depresses the pharmaceutical trade here is the dispensing of medical men, which is carried on in many country districts under special authorization of the Government. It is needless to dwell upon the detrimental, even dangerous effects of such a system; only one point must be particularly mentioned, because it stands in direct contradiction to the stringent regulations which the chemist is bound carefully to observe. In the absence of those medical men it very often happens that their wives, children, even the servants dispense and get hold of powerful poisons. How many mistakes may arise out of this practice of course nobody can tell, as it is very easy for a physician to smooth up such affairs, which would bring heavy punishment and almost commercial ruin to an unfortunate chemist.

In South Germany exists also a "Süddeutscher-Apotheker Verein" (South German Chemists' Association), which comprises almost all the chemists in the South, while in North Germany only a small fraction belong to the North German Chemists' Association; both Associations are about to be united in a General German Chemists' Association.

It might not be superfluous to add a few words about the great question which at present creates much uneasiness among the possessing classes of German chemists. It concerns the hoped-for application of the free-trade principle to the pharmaceutical profession. It is clear that the regulations of pharmacy, whereby a number of educated and industrious men are inexorably prevented from ever founding a home of their own, is in some respects odious, and consequently must produce opposition on the part of those who, less favoured in point of fortune, are compelled to spend their whole life in the employ of others, and when old and unable to work condemned to a miserable life, perhaps supported by public charity. Likewise, the medical profession has spoken with great zeal against the privileges of chemists, and much printer's ink has been spent. These attacks date as far back as the year 1826. In this year a Bavarian medical councillor, Dr. Schultes, Professor of Botany, etc., in Landshut, published a little book against the limitation and the fixed prices. This gentleman makes very grave charges against the chemists of his time—as for example, adulteration of drugs and chemicals, bribery of physicians, carelessness in dispensing, overcharging, etc.; and as a cure for this state of things free trade is demanded. Whether these imputations were truly founded cannot be argued here; but it is a fact that this publication had not the desired result, for all the conditions required for a successful agitation were not existing at that time. The movements of the year 1848, which swamped away so many restrictions imposed upon commerce and industry, did not much affect pharmacy, though in the following years the pharmaceutical question was actively discussed. With the year 1860, and later, the free-trade agitation took a more decided form. Several petitions begging for free trade in pharmacy were presented to the Prussian Chamber of Deputies, and in 1868 to the North German Diet. For some years the agitation was mainly conducted by a certain Mr. Pannes in Breslau, who took a most active part in these proceedings; but four years ago this gentleman, who was for the German chemists a sort of firebrand, got a licence granted by the Government, and since that time keeps himself very quiet. The different petitions, although recommended by several deputies, were refused by the medical department on the ground that the fulfilment of them would endanger the public welfare.* On the part of the possessing chemists, as might be expected, counter-petitions were presented, in which the maintenance of the *status quo* was strongly advocated, and the dreadful effects of free trade depicted in the blackest colours.

It will be interesting to your readers to learn some of the reasons brought forward by the stout defenders of the old system against the abolition of limitation, so much the more, as in these statements the English chemists are especially referred to, thereby showing in what light English pharmacy is still regarded here.

In a pamphlet treating upon this subject the following passages occur:—

"The Government must not only demand from the chemist a good, sound, practical, and scientific education, but it must likewise lay upon him an inviolable obligation, which, however, no control of the authorities will ever be able to enforce to the fullest extent; for this obligation being mainly a moral one, and the Government and the public in this case being to a certain degree dependent on the ill or good-will of chemists, it rests with him that he will always bear in mind, not so much his own material interest, but the rules of his science and his duties towards the patients. By free trade and unlimited competition the chemist will be estranged from his true vocation. Where free trade in pharmacy leads to, England, not to mention America, yields a truly frightful commentary. A scientific and faithful exercise of pharmacy is there entirely out of the question. Pharmacy moves about in boundless manner on the extensive field of speculation, and in the greedy strife for making money every other trade is resorted to. The returns are enlarged by advertisements and crying up of numberless quack medicines, without paying the slightest consideration whether that offered to the public is wholesome or not; quite setting aside those cases in which a commerce in physics of indifferent quality is carried on. The result of such free trade as this, is the delusion of credulous and ignorant people, who spend money for medicines which will not benefit their health at all. The number of cases of poisoning has increased to a dangerous degree, and forms a horrible commentary on the freedom of pharmacy in England; within six years 3,218 poisonings were officially reported; how many have not become known to the Government?* In spite of all antipathies of Englishmen against personal restrictions, it is felt there by every man of good sense, that this state of things, when compared with ours, is absolute barbarism against firmly established civilization; that freedom on this field is synonymous with freedom of more or less dexterous evasion of the penal laws respecting poison-murder, consequently synonymous with the permission for any unscrupulous charlatan to murder his fellow-citizens."

In another place it is said:—"It is beyond doubt that, with few exceptions, the English and French chemists do not satisfy just and reasonable claims. Candid English and French physicians constantly complain of the miserable state of chemists' businesses within their respective countries, and demand the introduction of similar arrangements to those which exist in Germany."

Absurd as these statements are, they form, however, the main defence of the supporters of the present condition of affairs, and they constantly put them forward to the Goverment and the public as a kind of scarecrow. Though the Government, till at present, has refused to introduce free trade in pharmacy, this does not imply that it regards the principle as really dangerous. This becomes quite evident, when the position the Government observed towards the medical profession is taken into consideration There is no limitation in the medical profession, and by the new trade law issued in 1868, the free trade principle ha been applied to the profession to its fullest extent, so that a present any person, without any diploma at all, who choose to do so, may practise and prescribe physic, as long as sai person abstains from ordering certain drugs and chemical contained in Schedules A and B of the Prussian Pharma copœia and styling himself doctor. The same law does awa with the official list of medical fees, and simply declares tha parties must themselves arrange about the charges. It beyond doubt that the exercise of pharmacy requires a extensive scientific education and constant and most careful attention; and no one who has studied the histo of natural science will deny that pharmacy has produced (and as I hope will still produce) men who have exercised an immense influence on the advancement of science, and won well-merited fame and honours; but with all just pride will any chemist be bold enough to assert that pharmacy is more important than medicine? To be sure, no candid follower of Esculapius will go so far; but in the name of common sense it may then be asked, cannot pharmacy prosper under the same circumstances as medicine does, as long as proper qualifications form a *conditio sine quâ non?* Or is the temptation smaller for a physician with small practice to exercise his calling rather in his self-interest than in accordance with the rules of science and for the public welfare than it would be for the chemist, that the latter should be spared the trouble of gaining a reputation by his own exertions? It would be nonsense to uphold such a presumption; but the real bearings of this question lie in quite a different direction. In consequence of the little commercial education of the chemists, and the limitation, granted at times when free-trade principles were quite unknown and unthought of, the value of the respective establishments has been raised to such a height that it now stands in no proportion to the real value. The Government allowed these things to go on, and even took advantage of them in several cases where it was itself the proprietor of such businesses; and therefore, if free-trade should be introduced, it would morally, as well as legally, be bound to compensate the present owners, and large sums would be required for that purpose. Some years ago, the *Pharmazeutische Zeitung* stated that the capital required to satisfy all claims would be thirty-three millions of thalers, and a few days back the same paper estimated the whole value of the 3,000 businesses in North Germany at sixty millions of thalers. These statements seem very exaggerated; but even when reduced to a third, it would be most unjust to make the country pay, and in fact it is entirely out of the question, especially as no compensations for this money can be expected, for the probability of the medicines becoming cheaper seems rather doubtful. To introduce free trade without compensating the chemists under the present circumstances, would simply mean ruin to them, their creditors, and their families. Now, it may be well to ruin a thousand to benefit a million, but to break up the homes of several thousand families, and to reduce them to utter poverty, merely that 4,000 or 5,000 young men may obtain an opportunity of setting up a business of their own, would be most cruel and most unjust, and no Government, whatever its views might be as regards limitation, can be expected to take a course that would prove so disastrous to a large number of useful members of the community. Besides, it is more than likely that the change of times will do a great deal to settle this vexed question.

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* I will mention here that the *Pharmaceutical Journal* some weeks ago referred to these transactions, and reported that an eminent statesman, Herr v. Kucke, spoke against the petitions. The name of the said statesman is Herr v. Vincke.

* In the *Pharmaceutical Journal*, April, 1870, page 661, it is stated t within the last ten years 301 cases of fatal poisoning occurred, of wh only twenty-six were traceable to vendors of medicines.

It is pretty clear that mainly the evils which would accompany the introduction of free trade in pharmacy, induces for the greatest part the defenders of the old system to offer such a strong opposition, and not because they really regard it as such a bad thing. This will, likewise, account for the circumstance that those men carefully avoid the discussion of the price-question. But in spite of all that may be said, this free trade question has not so much the character of a question of principle as of money, and the whole agitation mainly arose out of the excessively high prices of chemists' businesses.

PRESCRIPTIONS FOR PROVINCIAL ASSOCIATIONS.

By Joseph Ince.

NORWEGIAN.

I HAVE just received a collection from Christiania, from Mr. B. Habel, favoured by the editor of The Chemist and Druggist. I believe some account of Scandinavian pharmacy will appear next month, and therefore I confine myself to reproducing some formulæ of interest:—

I.

℞ Infus. rad. ipecacuanhæ, gr. xij.—℥vij.
Ess. opii benzoica, ℥j. M.

The mode of giving the strength of a preparation will be noticed. This is an old recipe. The new Norwegian Pharmacopœa, dated 1870, calls the preparation either Tinctura Opii Benzoica, or Tinctura Thebaica Benzoica. Here are three more prescriptions in the old style:—

I.

℞ Solut. acetat. plumbi, gr. xij.—℥viij.

II.

℞ Sol. ammon. mur., ʒj.—ʒiij.
Syrup. diacod, ℥j.

III.

℞ Solut. bicarb. natrici, ℥ss.—ʒxij.
Ess. aromat., ʒij.
Ess. aurantii, ʒj.
Acetat. morfinici, gr. jss.

This Ess. Aromat. is the present Norwegian Tinctura Aromatica, or Aromatisk Tinctur. The Ess. Aurantii is the Tinctura Anrantii, also called Pommerants—Tinctur.

℞ Cort. aurant, 20.
Sp. dilut., 100.

Fiat Tinctura. Of this they make Syrup of Orange, using the proportions of 10—100.

But now we come to the new regulations thus expressed. Ut systema metricum induximus, ita latius quam in priore editione systema, quod decimale dicunt, usurpavimus, ubicunque ita fieri potuit, ut fractis numeris non uteremur nec proportionem singularum partium eorum medicaminum, quæ ex priore editione retinuimus, multum mutaremus. The change is thus practically illustrated.

I.

℞ Solut. acetatis plumb., 0·70—240·00.

II.

℞ Santonici gram. 0·05.
Sacchar albi gram. 0·50. M. ft. pulv.

Sometimes these excellent Scandinavians run into French modes, as for instance:—

℞ Chlor. hydrargyri corrosivi, 50 c. grammes,
Aquæ destill, 120 grammes.

One passage from the Norwegian Pharmacopœa must be transcribed, else the next recipe would not be understood.

℞ Pulv. mass. pil. sedant c. cynogloss, gr. iv.
Pulv. sacchari, gr. x.

The former title was Massa Pilularum Sedantium cum Cynoglosso—the official is Massa Pilularum de Cynoglosso, or

Hostepulver.

℞ Rad. cynogloss, 15.
Bals. storacis, 3.
Sp. rect., 3.
Opii. pulv., 12.
G. olibani, 12.
G. myrrhæ, 18.
Sem. hyoscyam.
Flor. caryoph.
Cort. cinnam.
Croci. stigmat.
Castor. canadens., āā 6.

Pilulæ formantur ope Glycerini. Fifteen parts contain two parts of opium and one part of henbane seeds. As specimens of familiar prescriptions, the two following may be quoted:—

℞ Chlorat. kalic, ʒij.

Divide in iv.

℞ Ferri reducti, ʒiij.
Acetat. morf., gr. j.
Extr. c. benedict, ʒj.; in pil. 90.

This last is a prescription of the chief physician in Norway:—

℞ Rad. glycyrrhizarum, ℥ss.
Aq. communis, ʒxiv.
ad. colaturam, ℥vij.
Syrup. papaveris, ℥j.
Acet. morphiai, gr. j.

Boeck.

I am glad to receive these Scandinavian receipes, since during the past six weeks not one contribution of autograph formulæ has arrived. I persevere. Two hundred prescriptions more will finish the contemplated design in its integrity—namely, fifteen volumes for London, and fifteen for the provinces. Now that the charm of novelty is passed, will no one aid?

NOTES "EN VACANCE."

Paris, July 15, 1871.

At length we have reached what the Parisians call the centre of the civilized world; and I am by no means sure that they are wrong. Not only is this city the centre from which radiates those imperious dictates of fashion, those brilliant flashes of wit exhibited in literature or in the drama, those bright inventive ideas that in articles of fancy or works of art delight the whole world, but in graver matters, of scientific discovery or mathematical investigation, Paris also takes the lead. Her many *savants*, her numerous learned bodies, her "Institute of France" cause her to assume and maintain a rank and position among the followers of scientific thought that can scarcely be equalled by London, and is not surpassed by any one of the numerous seats of learning in Germany. The other Latin countries, Italy, Spain, and Portugal, simply follow her lead, their men of science admitting her superiority, and taking their lines of thought from her. This is especially the case with pharmacy. In Paris pharmacy assumes its rightful position. It ranks nearly on an equal footing with medicine; it is admitted to be (as is the case with medicine) a union of scientific pursuits; it comprehends much more serious studies, and includes a far higher variety of high-class divisions of learning than is conceded to it among us by those who simply apply the term to the compounding of drugs, and who scarcely admit it to be much more than a superior style of cookery. Now, though we admit that the practical benefit of any science is in its results, palpable to the public and beneficial to the community at large, yet, in order to judge of the scientific rank of any division of study (as medicine, pharmacy, astronomy, mathematics, etc.), the amount of thought and learning necessary to the results must be taken into consideration. There were many shrewd "leeches" and alchemists in the middle age; but real men of science, as, for example, Paracelsus, Albertus Magnus, Boyle, and Bacon, even with their crude ideas and uncertain line of argument, shone out even then as real men of science. And such as these, and worthy of a place among the *savants* of Europe, are the chief men in pharmacy in this city—some working at the *Ecole de Pharmacie*, some keeping open shop, at the same time that they give their minds to pharmaceutical study—some appearing from time to time in the "Comptes Rendues" of the *Academie*. Yes, pharmacy here takes her true rank, and her votaries and followers their true position. At the same time many are shrewd men of business; and perhaps this is nowhere better shown than in their trade enormous in extent—in *specialités*; or what we term patent medicines. This latter term would of course be inapplicable here, as the articles are neither patent, nor do they have a Government stamp.

In the present dearth of financial resources in France, however, we may very probably see the imposition of this tax. In the introduction of a new *specialité* a Paris pharmacien considers several points. In the first place the formula is published, and anybody may obtain this and make up the article himself. This is continually done, and thus therapeutics benefit by these new discoveries; for a *specialité* is scarcely ever launched here unless it has really some solid foundation of excellence, and if this is very great the formula, or a very similar one, is sure to find its way into the next edition of the Codex. Now, although men of science object to secret remedies, not without reason, yet this publication of newly-discovered medicines after they have been found to be beneficial, seems to me to be an unmitigated benefit. And there is scarcely such a potent influence for the discovery of such results as self-interest. This may seem harsh to many fellow-workers in the paths of science, but the interests of humanity are never secured by under-paid services, or by unremunerated work. This has often struck me in France, and especially in Paris—"the labourer is worthy of his hire." And this continual introduction of *specialités*, the result often of patient investigations, combined with the highest pharmaceutical skill, gives a vitality to this branch of acquired knowledge in the highest degree worthy of approval.

Of course the pharmacien must advertise. This may be considered as unprofessional, but surely in many instances it is simply the act of speaking to a much larger audience than can be reached by word of mouth; it is the act of informing a great number of persons of the excellence of a certain article. On this latter point in the argument, viz., the excellence of the *specialité*, I insist a great deal. I have been several times told that the advertising would be of little use were not the article so good and had such merits that people would recommend it to one another. Certain it is, that many of the most celebrated among these have merits of a high order, whether you regard them as the results of research, as specimens of manipulative skill, or as objects that have a therapeutical power for good. I do not touch, as outside the present question, the rare and dainty style of "putting" up; in the older articles this, however, is frequently not apparent.

While considering this subject there is a point that we must not lose sight of, and that brings us back to the supremacy of France among the Latin races—the Paris *specialité* has a very extensive field. Not only has it a range over Spain, Italy, etc.; but as Germany, owing to its laws on pharmacy may be scarcely said to have any, it extends its influence and meets with a ready sale over the Teutonic countries of Europe. In Constantinople, also, its sway is supreme, and it is the great staple of the chemists at Peru. But South America is its *El Dorado*; here the quantity sold of one really good and well-known *specialité* is almost fabulous. And the patronage of the doctor especially promotes this sale; for even in France it is a very common thing for medical men to prescribe a *specialité* of good medical repute, such as the tar-water of one, the pectoral *pâte* of another, the cod-liver oil of a third.

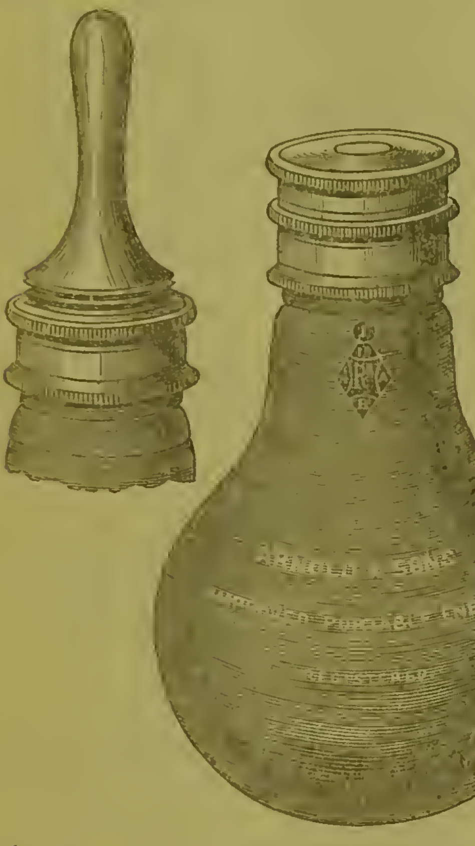
F. H. L.

DENTIFRICE WATER.

A NEW preparation, of attractive appearance, and excellent in use, is introduced to the trade by Messrs. Thompson and Capper, the homœopathic chemists of Liverpool. The use of the dentifrice water may be very confidently recommended where there is a tendency to decay or sponginess of the gums, its composition being evidently of a character to arrest the former, and also to act as an astringent.

PORTABLE ENEMA.

A new Enema, registered by Messrs. Arnold and Sons, of Smithfield, is very worthy of notice. It consists of an india-rubber bottle, which is specially prepared to stand any climate, and is fitted with a reversible pipe and mount, to which is arranged a cap, so that patients can with safety carry the fluid with them, and by simply taking off the cap and reversing the rectum pipe they have the enema ready for use. The numerous advantages of such an instrument will be readily seen. The mounts are made of brass, and carefully tinned on the inner side, and every part which



comes in contact with the fluid is also tinned, in order to prevent the possibility of corrosion. They are fitted in various ways, and answer equally well as an enema or vaginal syringe. A smaller size is made for injecting the uretha, so that the patient can readily and without fear of breakage carry with him the injection and syringe ready for immediate use.

SANITARY EXHIBITION, LEEDS.

It is announced that an exhibition of inventions, appliances, and contrivances, having for their object the sanitary improvement of the people, will be held at Leeds during the session of the Social Science Congress in that town next month. Water filters, disinfectants, and disinfecting apparatus, as well as processes for preserving meat, and dietetic preparations of all kinds are among the objects suggested. Sewage matters and improvements in the construction of dwelling-houses are other departments of the Exhibition. It is to be held in the old Cloth Hall, Park-row, Leeds, and the following are the regulations and conditions of exhibition:—

"1. All applications for space must be made to Dr. Robinson, Hon. Secretary to the Health Committee, Town Hall, on or before the 23rd of September.

"2. The specimen, model, or plan must be fully described, and its characteristics pointed out, and whether patented, and also the amount of space required.

"3. All articles for exhibition must illustrate some sanitary improvement, or be appertaining to, or conductive to the public health.

"4. Articles for exhibition, if approved by the Health Committee, will be received from the 25th of September to the 3rd of October.

"5. Tables will be provided, but if extra stands and conveniences are required, each exhibitor must provide for his own wants.

"6. The Health Committee reserve to themselves the right to accept or reject any article proposed for exhibition.

"7. In the event of the exhibition of articles being approved, space will at once be allotted, free of charge.

"8. The cost of conveying goods to and from the Exhibition must be borne by the exhibitor.

"9. The Committee will not be responsible for the safety of articles exhibited, but will use every effort to protect them.

"10. Notices will be placarded in the Exhibition to the effect that no article should be handled or displaced, unless personal examination is invited.

"11. Exhibitors are invited to describe, at the time of exhibition, in person, or in print, or otherwise, the leading characteristics of the article exhibited.

"12. The Exhibition will open on Thursday, October 5th, and close on Wednesday, October 11th.

"13. The Exhibition will be open to the public, gratuitously from ten to three (except on Saturday, when the hours will be from ten to five), and from three to five to members and associates only, on production of their ticket for the Congress.

"14. All goods exhibited must be cleared on the Thursday or Friday following the Exhibition."

MEDICAL EDUCATION.

The medical profession is not unfrequently recruited from the ranks of pharmacy, and it may therefore be useful to some of our readers if we give a rapid summary of the barriers of examination which protect that profession from being invaded by unskilled and uneducated persons. In the medical profession itself there is a strong and growing desire that the law will institute and authorise one portal of admission to the practice of medicine but the difficulties attendant on a new Act of this sort are very considerable, and it is likely that for a long time to come there will be many ranks and conditions of practitioners, a state of affairs which after all has its advantages as well as its drawbacks.

The General Medical Council fixes twenty-one as the earliest age at which a candidate for any professional licence shall be admitted to his final examination, the age in all instances to be duly certified. Previous to this final examination, he must have been registered as a medical student at least forty-eight months, and must have gone through a course of professional study, comprehending attendance during four winter sessions or three winter and two summer sessions at a recognised school. The Medical Council also makes certain claims with regard to the examinations themselves. With regard to the Preliminary, which must be passed before a medical student may be registered as such, it is required that it shall include English Language (including Grammar and Composition), Arithmetic (including Vulgar and Decimal Fractions), Algebra (including Simple Equations), Geometry (first two books of Euclid), Latin (including Translation and Grammar); and one of the following optional subjects: Greek, French, German, Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics).

For the Professional Examination it requires, "That the Professional Examination for a licence be divided into two parts: the first embracing the primary or fundamental branches directly connected with the practice of medicine or surgery. That the former be not undergone till after the close of the winter session of the second year of professional study; and the latter, or final examination, not until after the close of the prescribed period of professional study.

"That the examination in Physics, Botany, and Natural History, may be undergone at an earlier period than the first Professional Examination.

"That the Professional Examinations be conducted both in writing and orally, and that they be practical in all branches in which they admit of being so.

"That excellence in one or more subjects should not be allowed to compensate for failure in others; and that if a candidate be rejected for failure in any one subject, he should be re-examined in all."

The foregoing are the requirements of the General Medical Council which holds, and can withhold, the right of registration. The reader will bear in mind that these stipulations have to be observed by all the examining bodies, and this will save us much repetition.

The examining bodies themselves are the following :—

The University of Oxford which grants the degrees of M.B. and M.D. The medical student must pass the requisite examinations for the degree of B.A., and afterwards spend two years in study prior to the first or scientific examination for the degree of Bachelor of Medicine, and two years more prior to the final or practical examination for the same degree. Evidence must be brought to show that he has studied the practical parts of his profession in a first-class hospital. A dissertation has to be publicly read three years after the M.B., for the degree of M D.

The University of Cambridge, besides M.B. and M.D., grants the degree of M.C. (Master in Surgery). For M.B. five years of medical study are required, except in the case of medical students who have graduated with honours as Bachelors of Arts, four years being then sufficient. There are three examinations. The *first* in Mechanics and Hydrostatics, Chemistry (with heat and electricity), and Botany. The *second*, in Anatomy and Physiology (Human and Comparative), and Pharmacology. The *third* (at the conclusion of medical study), in Pathology and the Practice of Physic, Clinical Medicine, and Medical Jurisprudence. The examinations are partly in writing and partly oral, in the hospital, and take place twice annually. Previously to the first examination, lectures must have been attended on Chemistry (with manipulations) and Botany. Previously to the second examination, the student must have attended lectures on Anatomy and Physiology (Human and Comparative), Materia Medica, Pharmacy and Pathology; have dissected one season; and attended hospital practice one year. Previously to the third examination, lectures must have been attended on the Principles and Practice of Physic, Clinical Medicine, and Medical Jurisprudence; also Hospital Practice for three years.

The degree of M.D. may be taken three years after M.B. The regulations are similar to those at Oxford.

For the degree of M.C., the candidate must have passed the three examinations for M.B., and have attended lectures on Human Anatomy (a second course), on the Principles and Practice of Surgery, Clinical Surgery, Midwifery (with ten cases); also a second season of Dissections, three years' surgical practice at a recognised hospital, and a house-surgeoncy or dressership for six months. He is then required to pass an examination in Surgical Anatomy, Pathology, the Principles and Practice of Surgery, and Clinical Surgery.

The University of London stipulates for the M.B. degree. (1) The Matriculation Examination, or a degree of Arts, is accepted from the Universities of either Sydney, Melbourne, or Calcutta. (2) The Preliminary Scientific Examination and two examinations in medicines. The student must also have been engaged in professional studies at least four years subsequent to matriculation. The degree of M.D. may be competed for four years, or in some cases, five years after the M.B. degree has been taken. It includes logic and moral philosophy and medicine, including practical examination in clinical medicine. The University of London also grants the degrees of B.S. and M.S. (Bachelor and Master in Surgery). These comprehend the M.B.

The University of Durham grants a licence in medicine four years after matriculation, M.B. three years later, and M.D. one year later still, provided that the requisite courses are fulfilled and examinations passed. *Licentiates* and *Masters in Surgery* are also degrees granted by this University. These do not necessarily require that all the examinations for M.B. shall be passed.

The University of Edinburgh confers the degrees of M B., C.M., and M.D. The first must be passed before either of the others are granted. For the M.B. and C.M. degrees a course of four years, at least, of medical and surgical study is required, and each candidate is examined both in writing and *vivâ voce*—1st, on Chemistry, Botany, and Natural History; 2nd, on Anatomy, Institutes of Medicine, Materia Medica including Practical Pharmacy and Pathology; 3rd, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; 4th, clinically on Medicine and on Surgery in a hospital. For the M.D. degree two years of medical and surgical practice must elapse, the candidate must be a graduate in Arts, and must submit a thesis composed by himself on any branch of knowledge comprised in the professional examinations for the M.B. degree.

The University of Glasgow grants the same degrees and provides curricula and examinations similar to those of the University of Edinburgh.

The same may be said of the University of Aberdeen.

Also of the University of St Andrew's; except that by the latter the degree of Doctor in Medicine may be conferred on any registered medical practitioner above the age of forty years whose professional position and experience are such as, in the estimation of the University, to entitle him to that degree, and who shall, on examination, satisfy the medical examiners of the sufficiency of his professional knowledge; provided always, that degrees shall not be conferred, under this section, to a greater number than ten in any one year.

The University of Dublin (Trinity College) grants the degrees of M.B., M.D., and M.Ch., and also licences in medicine (L.M.) and surgery (L.S.). To take the degree of M.B. it is required that the candidate shall also take that of B.A., and shall have attended hospital and lectures for four years. The M.D. degree is granted to an M.B. of three years' standing, who must perform exercises before the Regius Professor of Physic. The degree of M.Ch. demands a curriculum somewhat different from, though of the same length of time, as that required for the M.B. examination. A licentiate in medicine or surgery has passed the medical course and examinations required for M.B. or M.Ch. respectively, but the fees are somewhat lower. He can, however, afterwards take up his degree.

The Queen's University in Ireland comprises the Queen's Colleges of Belfast, Cork, and Galway, each of which possesses a Faculty of Medicine. The degrees of M.D. and M.Ch. are granted by this University. The curriculum for either extends over four years, and comprehends the usual subjects.

Besides the foregoing Universities, the following Corporations grant licences to practise :—

The Royal College of Physicians, London. There are Licentiates, Members, and Fellows of the Royal College of Physicians, London. The licentiates have passed a Preliminary Examination in Arts, and two other professional examinations, besides giving evidence of at least four years of professional education as a registered medical student. The fee is fifteen guineas. The course of study previous to the examination for membership is almost similar to that prescribed for the licentiates. Members may also be admitted, after a certain examination, who have taken the degree of M.B. at other Universities. The fee is thirty guineas. The members of the College are eligible for Fellowship.

The Royal College of Surgeons of England. To become a member the following course is prescribed. Preliminary Examination. The following are the subjects for 1871 and 1872 :—

Part (1.)—Compulsory Subjects :—1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English Grammar. 4. Writing a short English composition; such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of Vulgar Fractions, and of Decimals. 6. Questions on the Geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History—that is, the succession of the Sovereigns and the leading events of each reign. 8. Mathematics :—Euclid, Books I. and II., or the subjects thereof; Algebra to Simple Equations inclusive. 9. Translation of a passage from the second book of Cæsar's Commentaries, "De Bello Gallico." Part (2.)—Optional Subjects :—Papers will also be set on the following six subjects, and each candidate will be required to offer himself for examination on one subject at least, at his option; but no Candidate will be allowed to offer himself for examination on more than four subjects :—1. Translation of a passage from the First Book of the Anabasis of Xenophon. 2. Translation of a passage from X. B. Saintine's "Picciola." 3. Translation of a passsage from Schiller's

"Wilhelm Tell." Besides these translations into English, the candidate will be required to answer questions on the grammer of each subject, whether compulsory or optional. 4. Mechanics. The questions will be chiefly of an elementary character. 5. Chemistry. The questions will be on the elementary facts of Chemistry. 6. Botany and Zoology. The questions will be on the classification of Plants and Animals. The quality of the handwriting and the spelling will be taken into account. Certain certificates, as for instance, that of the Middle Class Examinations (Senior), are accepted in lieu of this examination, provided such include Latin and Mathematics. The Professional Education must comprise four years of study subsequent to the preliminary examination, and include certain attendances at Lectures and Hospital Practice. The fee is £22, besides £2 for the preliminary examination. For Fellowship the curriculum is longer, the examinations more severe, and the fees higher. Or a member of eight years' standing may offer himself for the final examination for the Fellowship. The Royal College of Surgeons also grants certificates of qualification in midwifery and in dental surgery.

The Royal College of Physicians, Edinburgh, grants licences in medicine. The fee here is ten guineas. The curriculum is very similar to that which has been described. Any licentiate of a College of Physicians, or graduate of a British or Irish University, with whose knowledge of medical and general science the college may be satisfied, may be admitted a member of the college, provided he shall have attained the age of twenty-four years. The fee to be paid by a member is £31 10s. When a licentiate is raised to the rank of member he pays £21. When a member is raised to the rank of fellow the fee is £31 10s., exclusive of stamp duty, which amounts to £25.

The Royal College of Surgeons, Edinburgh, also grants diplomas of membership. The fee here for the professional examinations amounts to £10.

The Royal College of Physicians of Edinburgh, and the Royal College of Surgeons of Edinburgh, while they still continue to give their diplomas separately, under separate regulations, have made arrangements by which, after one series of examinations, the student may obtain the diplomas of both colleges. The general principle of this joint examination is, that it shall be conducted by a board in which each body is represented in those branches which are common to both medicine and surgery; but that the College of Physicians shall take exclusive charge of the examination in medicine, and the College of Surgeons of the examination in surgery. The object of the joint examination, is, to give to students facilities for obtaining from two separate bodies, and at less expense, a qualification in medicine, and a qualification in surgery. Students passing that examination successfully will be enabled to register two qualifications under the Medical Act—Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

The Faculty of Physicians and Surgeons of Glasgow also grant a diploma. The candidates follow a curriculum, similar to that of the Edinburgh College of Surgeons. The fee for the preliminary examination is 10s., and for the professional examinations £10. In connection with the Royal College of Physicians of Edinburgh a double diploma is also granted. The fee for this, as for the similar double diploma in Edinburgh (professional examinations only), is £16.

The King and Queen's College of Physicians in Ireland grants a licence in medicine, and also a licence in midwifery. A four-year's course of medical study is required, and a special additional examination for the midwifery qualification. The fee for the licence in medicine, 15 guineas; for the midwifery diploma, 3 guineas; or if both are taken out together £16.

The Royal College of Surgeons in Ireland grants *Letters Testimonial* and Fellowship. For the former a preliminary examination and the usual medical course is required, the total of the fees being £26 15s. For Fellowship the B.A. or an equivalent examination is demanded as preliminary, and a longer course of study. The fee is £47 5s., if the candidate intends to practise within ten miles of Dublin, or £36 15s. otherwise.

The Society of Apothecaries, London, grants a certificate of qualification to practise as an Apothecary, and requires that the candidate shall produce testimonials of having passed a Preliminary Examination in Arts, as a test of general education. Of having served an apprenticeship or pupilage of not less than five years to a practitioner qualified by the Act of 1815. This period may include the time spent in attending lectures and hospital practice. Of having attained the full age of twenty-one years. Of good moral conduct. And of having pursued a course of medical study in conformity with the regulations of the Court. The course of study includes three winter sessions and two summer sessions. The extent of the examinations is modified towards gentlemen holding the diplomas of other examining bodies. The Society also grants a certificate of qualification to act as an assistant, the examination comprising the following subjects:—In translating physicians' prescriptions in the British Pharmacopœia; in Pharmacy, Pharmaceutical Chemistry, and Materia Medica. *Fees.*—For a certificate of qualification to practise, six guineas, the half to be paid at the first examination; for an assistant's certificate, two guineas.

The Apothecaries' Hall of Ireland. *Professional Education and Examination.* — Every candidate for the licence to practise must produce certificates to the following effect:—1. Of having passed an examination in Arts, previously to entering on professional study. 2. Of being registered as a Student in Medicine. 3. Of being at least twenty-one years of age, and of good moral character. 4. Of apprenticeship to a qualified apothecary, or of having been engaged in Practical Pharmacy with an apothecary for three years subsequently to having passed the examination in Arts. 5. Of having spent four year in professional study. 6. Of having attended the following courses—viz., Chemistry, during one winter session; Anatomy and Physiology, during two winter sessions; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Practical Pharmacy and Practical Chemistry (in a recognised laboratory), each during three months; Principles and Practice of Medicine, and Therapeutics, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised hospital (attendance upon twenty cases); Surgery, during one winter session; Medical Jurisprudence, during one summer session; instruction in the practice of Vaccination. 7. Of having attended at a recognised hospital or hospitals the Practice of Medicine and Clinical Lectures on Medicine during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery during one winter and one summer session. The examinations are divided into two parts. The first part comprehending Chemistry, Botany, Anatomy, Physiology, and Pharmacy; the second, Medicine, Therapeutics, Surgery, Pathology, Midwifery, Forensic Medicine, and Hygiene.

Candidates for the certificate of Assistant to an Apothecary in Ireland, in compounding and dispensing medicine, are examined in the British Pharmacopœia and in Pharmacy, scientific and practical, including the history, characters, and qualities of medicines, with their preparations and doses, and in the translation of Latin prescriptions. Neither the Arts' certificate nor the certificate of Apprentice is required for the examination of Assistant.

PHARMACEUTICAL STUDENTS AND OTHERS.

WE may on this occasion direct especial attention to the educational announcements respecting the forthcoming session which appear in THE CHEMIST AND DRUGGIST of this month.

At the School of Pharmacy, Bloomsbury-square, lectures are delivered on Monday, Tuesday, and Wednesday mornings, by Professor Redwood, on Chemistry and Pharmacy. On Friday and Saturday mornings, by Professor Bentley. The Laboratory, under the charge of Professor Attfield, is open from 9.30 to 5 daily (Saturday 9.30 till 2), and students can enter for daily instruction or for two or three days weekly. The complete course is ten months, but students can take advantage of the instruction for one, two, three, or five months. The session commences in October and ends in July.

In Dublin the Royal College of Science for Ireland provides technical education in various courses of scientific study. A course of laboratory instruction is provided at a fee of £10 for the session of nine months, or £2 per month. At this College two scholarships and three exhibitions of the annual value of £50 each become vacant each year.

Excellent opportunities for the study of chemistry, pharmacy, botany, etc., are also provided at

The North London School of Chemistry, etc., conducted by Mr. J. C. Braithwaite. Chemistry, Botany, and Materia Medica are practically taught, and students prepared for the Pharmaceutical Examinations.

The South London School of Chemistry and Pharmacy, under the direction of Dr. John Muter, M.A, who also devotes especial attention to students preparing for the Pharmaceutical Examinations.

At the well-known College of Chemistry in Liverpool, founded by Dr. Sheridan Muspratt, Mr. Martin Murphy, F.C.S., is now the principal. Besides a complete course of laboratory instruction, Mr. Murphy announces special terms for medical and pharmaceutical students.

Mr. Henry Matthews, F.C.S., also receives pupils for practical instruction in chemistry as applied to medicine, agriculture, and commerce.

We may also call the attention of chemists and druggists to the announcement of Mr. S. W. Rich, analytical chemist, who undertakes the conduct of the analyses which they may wish to transfer.

The announcements of several of the medical schools will also be found in our columns, as well as one from the Royal Veterinary College. From these it will be seen what will be the cost of the course of medical instruction required by the examining boards referred to in the foregoing article. At the Middlesex Hospital, Dr. J. Murray will deliver the opening address, at St. Mary's, Dr. Alfred Meadows is appointed; at St. Thomas's, Mr. Le Gros Clark; at Westminster, Dr. Basham; and at the Royal Veterinary College, Deputy Professor Pritchard.

The following lists of books on the various branches of study required for the Pharmaceutical Examination may be found useful as a reference:—

BOTANY.

TITLE.	AUTHOR.	PRICE.	PUBLISHER.
Botanical Terms, Dictionary of	Henslow	4/	Groombridge
Botanists' Companion	Balfour	2/6	Black
Botany, British Manual of	Babington	10/6	Van Voorst
,, Class-Book of	Balfour	21/	Black
,, Elementary	Oliver	4/6	Macmillan
,, Elementary Course of	Henfrey	12/6	Van Voorst
,, Elements of	Balfour	3/6	Black
,, First Book of	London	2/6	Bell & Daldy
,, Introduction to	Reunie	2/	Bohn
,, Manual of	Bentley	12/6	Churchill
,, ,,	Balfour	12/6	Black
,, Medical	Woodville & Hooker	109/	Bohn
,, Outlines of	Balfour	5/	Black
,, Rudiments of	Heufrey	3/6	Van Voorst
British Poisonous Plants	Sowerby	9/6	,,
Student's Flora, British Isles	Hooker	10/6	Macmillan
Vegetable Physiology and Systematic Botany	Carpenter & Lankester	6/	Bohn

CHEMISTRY.

TITLE.	AUTHOR.	PRICE.	PUBLISHER.
Analysis, Chemical, Commercial, Handbook of	Normandy	9/	Lockwood
Analysis, Chemical, Select Methods	Crookes	12/6	Longmans
,, Qualitative	Fresenius	9/	Churchill
,, ,, Introduc. to	Fownes	2/	,,
,, ,, Manual of	Galloway	8/6	,,
,, Quantitative	Fresenius	12/6	,,
,, Volumetric	Sutton		,,
Analytical Tables	Campbell-Brown	2/6	Holden, (Liverpool)
Chemical Problems	Thorpe	1/	Macmillan
,, Student, Lecture Notes for	Frankland	4/	Van Voorst
,, Theory	Wurtz	6/	Macmillan
Chemistry, Agricultural	Johnston	11/6	Blackwood
,, ,,	Stockhardt	5/	Bohn
,, Notes on	Groome	1/6	Educational Trading Co.
,, Application to Arts and Manufactures	Richardson and Watts	126/	Ballière
,, Dictionary of	Watts and others	143/	Longmans
,, Elements of	Miller	60/	,,
,, ,,	Graham	60/	Ballière
,, Elementary	Martyn Hart	3/6	Cassell
,, ,,	Roscoe	4/6	Macmillan
Chemistry, Elementary	Fownes	14/	Churchill
,, First Step	Galloway	6/6	,,
,, Second Step	,,	10/	,,
,, General, Medical, and Pharmaceutical	Attfield	12/6	Van Voorst
,, of Common Life	Johnston	11/6	Blackwood
,, Practical	Odling	7/6	Longmans
,, Practical	Bowman & Bloxam	6/6	Churchill
,, Practical Pharmaceutical	Wittstein and Darby	6/	,,
,, Principles of	Stockhardt	5/	Bohn
,, Photographic	Hardwick	7/6	Churchill
,, Inorganic and Organic	Bloxam	16/	,,
,, Medical	Bowman & Bloxam	6/6	,,
,, Notes for Students	Bernays	3/6	Groombridge
,, Scientific, Introduc. to	Barff	4/	,,
Laboratory Guide (Agricultural)	Church	5/	Van Voorst
,, Teaching	Bloxam	5/6	Churchill
,, Text-Book	Valentin	10/6	,,

PHARMACY, ETC.

TITLE.	AUTHOR.	PRICE.	PUBLISHER.
Cyclopædia of Practical Receipts	Cooley and Brough	28/	Churchi
Druggists' General Receipt Book	Beasley	6/	,,
Chemist and Druggist Guide to Trade	Series of Trades	1/	Houliston
First Lines for Chemists	Steggall	3/6	Churchill
Materia Medica	Frazer	10/6	,,
,,	Royle and Headland	12/6	,,
,, and Therapeutics	Wahluch	15/	,,
,, ,,	Pereira (abgd.)	21/	Longmans
,, Pharmacology and Therapeutics	Scoresby-Jackson	12/6	Machlachlan and Stewart
Pharmaceutical Guide	Smith	6/6	Churchill
,, Latin Grammar	Cooley	5/	Groombridge
Pharmacopœia, Companion to	Squire	10/6	Churchill
,, Conspectus of	Thompson	6/	Longmans
,, London Hospitals	Squire	5/	Churchill
,, Prescriber's Analysis	Nevin	3/6	,,
,, Supplement to	Redwood	22/	,,
,, Veterinary	Tuson	7/	,,
Pharmacy, Elements of	Lescher	7/6	,,
Pocket Formulary	Beasley	6/	,,
Prescriptions, Book of	,,	6/	,,
Selecta e Præscriptis	Pereira	5/	,,

Corner for Students.

CONDUCTED BY RICHARD J. MOSS, F.C.S.

The chemical formulæ employed in this section are based upon the new system of atomic weights, unless the use of the older system is specially indicated. In the *British Pharmacopæia* the symbols corresponding to those adopted here are printed in heavy Clarendon type. The new editions of Fownes's *Manual of Chemistry*, and Attfield's *Chemistry: General, Medical, and Pharmaceutical*, supply the data required for calculations, and are recommended as text-books.

QUESTIONS.

First Division.

We shall give another exercise in Qualitative Analysis this month. Students who wish to compete should send in their names and addresses before the 20th inst. On the 25th, we shall forward samples of a mixture of salts to be examined for ammonium and the following metals—K, Na, Ba, Si, Ca, Mg, Zn, Mn, Al, Co, and Fe.

Answers will, as usual, be received up to the 15th of the following month.

Second Division.

I. CHLOROMETRY.—There is a method given in the Pharmacopœia for the determination of the available chlorine in chlorinated lime; describe one other test for the same purpose, and explain its mode of action.

II. QUALITATIVE ANALYSIS.—A sample of commercial salts of tartar contains silica; how would you determine the percentage of this substance present?

III. POTASSIUM.—In precipitating potassium as acid tartrate, it is considered desirable to employ acid sodium tartrate, instead of tartaric acid. Why?

IV. ZINCI CHLORIDUM, *B.P.*—Why are chlorine water and zinc carbonate employed in the preparation of this substance?

V. MAGNESIÆ CARBONAS, *B.P.*—Calculate the weight, in ounces, of the theoretical product of the process for the preparation of this substance.

ANSWERS.

First Division.

Exercise in Qualitative Analysis.—The substance given for analysis contained sodium, magnesium, and iron (dyad and triad), with slight traces of potassium and of magnesium phosphate.

There were twenty-five samples of the mixture, weighing two grammes each, forwarded to different applicants; we received in reply fifteen analyses from the students whose names are arranged in the annexed list in order of merit. The maximum number of marks attainable is 100.

Second Division.

I. Acids.—In one fluid ounce, each of officinal nitric, sulphuric, and hydrochloric acids, there are 186·375, 25·802, and 346·115 grains of water respectively.

One fluid ounce of nitric acid weighs (437·5 × 1·42 =) 621·25 grains; of this 70 per cent. is nitric acic (HNO_3), the remainder, viz. 30 per cent., is water. To find the weight of the latter, we have the proportion—

$$100 : 621{\cdot}25 = 30 : x \therefore x = 186{\cdot}375.$$

II. Analysis.—Sodium carbonate is at once distinguished from the other carbonates by its ready solubility in water, and the brilliant yellow colouration which a platinum wire dipped in this solution imparts to a Bunsen flame. Lithium imparts a carmine tinge to flame; its carbonate is sparingly soluble in water. Calcium and barium colour flame yellowish-red and yellowish-green respectively; their carbonates are insoluble in water. The flame tests alone are sufficiently characteristic; but to confirm them, treat each of the four carbonates with water—the most soluble one is sodium carbonate. To the remaining mixtures, add hydrochloric acid until effervescence ceases; and to each of these solutions add two or three drops of a solution of calcium sulphate—the barium solution gives a white precipitate of barium sulphate. To each of the two remaining solutions add sulphuric acid, which precipitates calcium as sulphate, but causes no visible change in the lithium solution. Finally, to the remaining solution, add sodium hydrate to slightly alkaline reaction, and then sodium phosphate, and boil—a white crystalline precipitate confirms the presence of lithium.

III. Gas Analysis.—The compound gas is ethene or olefiant gas, C_2H_4. The four volumes of hydrogen required for the final explosion, combined with two volumes of oxygen; therefore, fifteen volumes of this gas, out of the seventeen, combined with the five volumes of the compound gas, and produced ten volumes of a gas which must have been carbon dioxide, as it was absorbed by potassium hydrate. But carbon dioxide contains its own volume of oxygen, so that the other five volumes of oxygen must have disappeared in forming water with ten volumes of hydrogen supplied by the compound gas. Again, the ten volumes of carbon dioxide require five volumes of hypothetical gaseous carbon, which must have been derived from the gas under examination. Consequently, it contained its own volume of carbon, and twice as much hydrogen, as represented by the above formula.

IV. Gas Volume.—Twenty grammes of copper employed in the decomposition of nitric acid yield 5·221 litres of nitrogen dioxide at 735 m.m. pressure, and 21° C. The reaction that takes places is represented by the following equation:—

$$8HNO_3 + Cu_3 = 2NO + 3(NO_3)_2Cu + 4H_2O.$$

The weight of copper represented here is (63·5 × 3 =) 190·5, and that of nitrogen dioxide (30 × 2 =) 60; therefore, to ascertain the weight of the gas produced by 30 grammes of copper, we have the proportion—

$$190{\cdot}5 : 20 = 60 : x \therefore x = 6{\cdot}299.$$

But a standard litre of gas weighs 1·3434 grammes; therefore, the volume produced is $\left(\frac{6{\cdot}299}{1{\cdot}3434} = \right)$ 4·689 litres. To correct this for the given temperature and pressure, we have—

$$\left.\begin{array}{l} 735 : 760 \\ 273 : 294 \end{array}\right\} = 4{\cdot}689 : x \therefore x = 5{\cdot}221.$$

V. Specific Gravity.—One gallon of the milk weighs 10·32 pounds. The ball displaced (15 – 3·5 =) 11·5 grains of water, and (15 – 3·132 =) 11·868 grains of milk; therefore, the specific gravity of the milk is $\left(\frac{11{\cdot}868}{11{\cdot}5} = \right)$ 1·032; and one gallon of it weighs (1·032 × 10 =) 10·32 pounds.

PRIZES.

The First Prize for the best analysis of the mixture of salts given for an exercise in Qualitative Analysis, as announced in our July number, has been awarded to

James Copley Creuset, Peel-street, Nottingham.

The Second Prize for the best answers to the questions published in our July number has been awarded to

William W. Graham, 17, John-Street, Dalbeattie, N.B.

Marks awarded for Answers.

First Division.

	Total.
Creuset (*1st prize*)	95
B. P.	90
H. C. Webb	85
Nil Sine Labore	80
Alpha	75
P. W.	74
W. Laugher	73
T. Griffin	70
J. W. Smith	68
E. J. B.	60
F. W. Fletcher	58
C. H. Flemming	50
Otho	21
W. A. N.	20
William	0

Second Division.

	I.	II.	III.	IV.	V.	E.	Total.
Graham (*2nd prize*)	5	4	6	2	5	3	25
A. H.	2	3	5	6	5	3	24
J. Walker	5	5	5	0	5	3	23
E. R. A. M.	2	6	5	2	5	3	23
Nil Desperandum	0	4	5	6	5	2	22
Beginner	2	4	2	5	5	0	18
J. L. W.	2	3	0	5	0	2	12
H. B.	0	3	0	1	2	2	8

TO CORRESPONDENTS.

*** All questions forwarded to us for publication in this "Corner for Students" should be accompanied by the answers which the propounders believe to be correct. Communications should include the names and addresses of the writers; those which reach us after the fifteenth day of the month succeeding that in which the questions appear will be disregarded.

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher naming the book they select, and stating how they wish it forwarded.

B. P.—There was a considerable quantity of dyad iron present, but only a small quantity of triad.

H. C. Webb.—If the solution which you tested for calcium was not very dilute, the precipitate with ammonium oxalate was probably due to magnesium. We fear that some of the potassium detected must have been derived from your reagents, as the quantity present in the mixture was quite insufficient to produce the results which you describe.

Nil Sine Labore.—If you try to detect a small quantity of potassium in the presence of sodium with the flame-test, you will find that it is the portion of the flame immediately above the sample that is coloured violet when viewed through the blue glass, and that this colouration is very transitory. The mixture contained a trace of ferric oxide, which did not dissolve in the water; it also contained a trace of ferric sulphate.

Alpha.—Your suggestion has had our consideration.

P. W.—Your powers of observation are not very highly developed. The mixture did not dissolve readily in distilled water; it is true that the portion insoluble in water was very small, but it was quite too large to escape observation. You could not detect a trace of potassium by the method which you followed. The solution to be tested (free from ammonium) should be evaporated to dryness on the water bath with a few drops of hydrochloric acid and platinic chloride, and the residue treated with a very small quantity of water, or with alcohol; a heavy yellow precipitate remaining undissolved indicates the presence of potassium.

W. Laugher.—You give the examination of solution B, and state that it was treated with ammonium sulphide in the same way as A; but you do not say what these solutions are. You will save us much trouble by making a clearer distinction between the different filtrates and precipitates.

T. Griffin.—The mixture contained a considerable quantity of sodium, and gave a most decided flame reaction.

W. J. Smith.—You appear to have observed the flame colouration, but not to have drawn any conclusion from it.

E. J. B.—Your test of the solubility of the substance must have been carelessly performed: important information may often be gathered by carefully observing the behaviour of a substance with solvents. The calcium which you found was probably derived from your filter paper; you can try if this was the case by treating some of the paper with a little acetic acid, and then testing the latter with ammonia and ammonium oxalate.

F. W. Fletcher.—We cannot account for your not detecting the sodium. You do not appear to have expelled ammonium before testing for potassium with platinic chloride; ammonium forms a very similar precipitate.

C. H. Flemming.—Paper not signed. You should have detected magnesium by the method employed; perhaps you did not allow sufficient time for the formation of the precipitate.

Otho.—There was not the slightest trace of either chromium or aluminium present, nor are they likely to occur in your reagents as impurities. It is not improbable that your test tubes were not thoroughly clean; they should always be washed with a sponge or brush, and rinsed out with distilled water before use.

W. A. N.—The test that you applied for magnesium requires that the solution should not be very dilute—a precaution which we fear you neglected. It should also be cold, and frequent agitation promotes the formation of the precipitate.

William.—You appear to have found all the metals for which you sought, and also to have proved some of the same metals to be absent; but your analysis is so ill-arranged that we cannot point out the sources of your errors.

Graham.—II. Lithium carbonate is sparingly soluble in water. It is not strictly correct to say that calcium carbonate, for example, is dissolved by treating it with hydrochloric acid; it is converted into chloride, and dissolved as such.

A. H.—I. N_2O_5 and SO_3 are not true acids; they are more correctly termed nitric and sulphuric anhydrides respectively.

J. Walker.—IV. You adopted an incorrect molecular weight for nitrogen dioxide.

E. R. A. M.—I. See remark to *A. H.*

Nil Desperandum.—II. Lithium is partly precipitated as carbonate, when ammonia and ammonium carbonate are added to its solutions, provided they are not very dilute.

J. L. W.—III. Carbon monoxide is not produced as you state, nor is it absorbed by potassium hydrate. V. It is obvious that the milk is heavier than water, as the ball weighs less in it than in the water.

H. B.—I. You forget that a fluid ounce of each acid weighs more than a fluid ounce of water. II. Hydrochloric acid is a bad solvent for calcium in the case you mention; it would be better to employ acetic acid, in which calcium oxalate is insoluble.

Books offered as First Prizes.

Attfield's *Chemistry: General, Medical, and Pharmaceutical.* (Van Voorst.)
Balfour's *Manual of Botany.* (Black.)
Brooke's *Elements of Natural Philosophy.* (Churchill.)
Conington's *Handbook of Chemical Analysis;* with Tables of Qualitative Analysis adapted to the same. (Longmans.)
Eliot and Storer's *Manual of Inorganic Chemistry.* (Van Voorst.)
Fownes's *Manual of Elementary Chemistry.* (Churchill.)
Fresenius's *Qualitative Analysis.* (Churchill.)
Galloway's *Qualitative Analysis.* (Churchill.)
Galloway's *Second Step in Chemistry.* (Churchill.)
Ganot and Atkinson's *Elementary Treatise on Physics.* (Longmans.)
Garrod's *Materia Medica;* with Modern Chemical Notation. (Walton.)
Nead's *Chemical Analysis, Qualitative* and *Quantitative.* (Reeve.)
Northcote and Church's *Qualitative Analysis.* (Van Voorst.)
Odling's *Outlines of Chemistry.* (Longmans.)
Royle and Headland's *Materia Medica.* (Churchill.)
Williamson's *Chemistry for Students.* (Clarendon Press.)
Barff's *Introduction to Scientific Chemistry.* (Groombridge.)

[Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.] *See list on another page.*

Books offered as Second Prizes.

Balfour's *Elements of Botany.* (Black.)
Bloxam's *Laboratory Teaching.* (Churchill.)
Church's *Guide for Students in Agricultural Chemistry.* (Van Voorst.)
Galloway's *First Step in Chemistry.* (Churchill.)
Gill's *Chemistry for Schools.* (Walton.)
Hofmann's *Introduction to Modern Chemistry.* (Walton.)
Huxley's *Lessons in Elementary Physiology.* (Macmillan.)
Oliver's *Lessons in Elementary Botany.* (Macmillan.)
Orme's *Introduction to the Science of Heat.* (Groombridge.)
Potts's *Elements of Euclid.* School Edition. (Longmans.)
Roscoe's *Lessons in Elementary Chemistry.* (Macmillan.)
Wormell's *Elementary Course of Mechanics.* (Groombridge.)
Wurtz's *History of Chemical Theory.* Translated by Watts. (Macmillan.)

[Any scientific book which is sold for about five shillings may be taken as a second prize.] *See list on another page.*

THE PRACTICE OF PHARMACY IN GREAT BRITAIN.

IN the Thirteenth Report of the Medical Officer of the Privy Council (recently issued) under the above heading, Mr. Simon writes thus:—

"Under the provisions of the Pharmacy Act, 1868, described in my last year's report, I conveyed to the Pharmaceutical Society, in 1870, your Lordships' approval of the Society's annual list of examiners for the purposes of the Act, and have now to submit to your Lordships the satisfactory report made by Dr. Greenhow on the London examinations of the Society in 1870, as visited by him for your Lordships' information.

"I regret to report to your Lordships that the power which, for the public protection, the first section of the Act vests in the Pharmaceutical Society, to prescribe (with consent of the Privy Council) regulations as to the keeping, dispensing, and selling of poisons, is still entirely unexercised. I believe it to have been by an accidental oversight in legislation, that, while all other powers to be exercised for public purposes by the Society under the Act were vested in the Council of the Society, the language of the first section vested in the commonalty, and not in the Council, the very important power which that section confers, and to which my present observations relate. It is perhaps not surprising that a large body of tradesmen should be slow to take the initiative in imposing even the most reasonable penal restrictions on themselves: but I have to submit to your Lordships, as a fact which you may deem deserving the consideration of Parliament, that this non-fulfilment of the Society's duty, to make rules against dangerous slovenliness in the keeping, dispensing, and selling of poisons, is a breach of the implied contract under which the Legislature in 1868 gave powers and privileges to the Society."

The following is Dr. Greenhow's report on the examinations:—

"During the year 1870 the Board of Examiners of the Pharmaceutical Society held twenty-six meetings: four for the preliminary examination in Latin, English, and arithmetic, and twenty-two for the technical examinations.

"At the preliminary examinations 742 candidates presented themselves, of whom 521 passed, and became thereby qualified to present themselves for the minor examination, whilst the remaining 221 were rejected. I have carefully read the papers set for these examinations, and also many of the answers written both by successful and unsuccessful candidates, and am of opinion that the examination is not too severe nor the mode of conducting it too rigid, and that the value of the written answers has been estimated with accuracy and impartiality. In these circumstances, the rejection of so large a proportion of the candidates, on the score of defective attainments in the main subjects of middle-class instruction, indicates the low standard of general education prevalent among those classes of society from which the candidates are chiefly derived; and renders it obvious that, until some improvement takes place in this respect, the standard of preliminary examination by the Pharmaceutical Society is pitched as high as can be attempted with practical advantage.

"Of the twenty-two meetings held for the examination of candidates in technical subjects, thirteen were devoted to the major and minor examinations, and nine to the modified examination.

"During the year 1870 258 candidates presented themselves for the *minor* examination, of whom 178 passed and were registered as chemists and druggists, and eighty or nearly one-third, were rejected as incompetent. Of these eighty unsuccessful candidates fifty failed to obtain the number of marks requisite for passing the examination as a whole; the remaining thirty obtained the requisite total number of marks calculated on all the subjects collectively, but failed to obtain the numbers requisite for passing in all the separate subjects. Of these thirty candidates, seven failed in one of the six subjects comprised in the examination, eighteen in two, four in three, and one in four subjects respectively, and by the regulations of the Pharmaceutical Society they must present themselves for re-examination in those separate subjects in which they failed to pass, before they can become qualified for registration as chemists and druggists.

"I should, perhaps, briefly repeat here what I explained in my report of last year, that in order to pass any of the examinations a candidate must obtain not less than half the number of marks given for the examination as a whole, and is even then only entitled to pass provided that in none of the separate subjects comprised in the examination his number of marks has fallen below one-fourth of the standard number allotted to the subject. It is true that even though a candidate may have failed to obtain one-fourth of the standard number of marks in a single subject, if his excellence in all the other subjects be remarkable, he may still possibly be allowed to pass by a special vote of the board of examiners; but practically such a case very rarely occurs. Further, a candidate who has obtained the required total number of marks calculated on all the subjects of examination collectively, but has fallen below one-fourth the standard number in one or more of the separate subjects, is required to present himself for re-examination, not only in those subjects, but also in any of the other subjects in which he may have failed to obtain one-half of the standard number of marks. By these arrangements, which appear to me to be equitable, superior excellence in some branches of the examination is to a certain degree set against any weakness in others which does not involve incompetence in essentials.

"For the *major* examination seventy-five candidates presented themselves during the year, of whom fifty-nine passed and were registered as pharmaceutical chemists, whilst sixteen, or more than one-fifth, were rejected. Nor can this be regarded as otherwise than a large proportion, when it is considered that all these candidates must have previously passed the minor examination, and were thereby already qualified to carry on business as chemists and druggists. The examination of candidates for the major qualification is conducted partly by means of written papers; partly by *vivâ voce* questions and answers upon the nature, quality, composition, and preparation of drugs and chemicals placed before the candidates; and partly by practical examination in the dispensing and compounding of prescriptions, and in the application of the requisite chemical tests for determining the nature of one or more of the definite chemical compounds employed in medicine. The papers written in answer to questions set by the examiners show that the candidates have received very different degrees of elementary and technical education. Some of the papers evince a really high degree of cultivation, whilst others fall below mediocrity. The practical examination in testing is conducted on the same day as the written examination, and each candidate is required to determine, by means of the appropriate chemical tests, the presence, in a given solution, of some chemical comprised in the British Pharmacopœia. The candidate is not made aware until the moment what solution will be presented to him for examination, and he applies his tests under the eye of the examiner, who takes each candidate in turn at a counter upon which are placed the requisite apparatus and tests. Solutions of such salts as the perchloride of mercury, sulphate of copper, perchloride of iron, bromide of potassium, acetate of lead, and alum were given to be tested on the occasions on which I was present. Of the sixteen candidates who were unsuccessful in the major examination thirteen failed to obtain the number of marks necessary in order to pass the examination as a whole; the remaining three obtained the requisite total calculated on all the subjects collectively, but fell below the standard minimum of marks in one or more of the separate subjects, and will therefore be required to undergo a re-examination in those subjects before they can be registered as pharmaceutical chemists.

"The *modified* examination was instituted, as I explained last year, for the benefit of such persons as, being of full age, had been actually engaged in the dispensing and compounding of prescriptions as assistants to pharmaceutical chemists, or to chemists and druggists, for a term of not less than three years previous to the passing of the Pharmacy Act of 1868.

"The modified examination entitles such candidates, if they can give proof of reasonable practical competence, to be registered as chemists and druggists without having attained the standard of scientific knowledge now fixed for the minor examination which confers the same title. It will therefore be discontinued so soon as the class of person for whose benefit it was instituted shall have all been examined. During the past year 348 candidates presented themselves for this examination, of whom 231 passed and were registered as chemists and druggists, and 117 were rejected. Of these latter, 102 failed to obtain the number of marks required to enable them to pass the examination as a whole; the remaining fifteen obtained the total number, but failed to obtain the required minimum in one or more or the separate subjects. Two of the fifteen failed in two subjects and thirteen in one subject each; but the four subjects which alone are comprised in this examination are all so indispensable, that incompetence in any one of them would render a person quite unfit to be trusted with the responsible duty of compounding and dispensing prescriptions. The candidates in these modified examinations have appeared to me to be treated by the examiners with equal consideration and tact, so that while on the one hand they are not rejected on matters of minor importance or technical form, on the other hand they are not passed unless their practical competence be proved sufficient to guarantee the safety of the public. The fact, therefore, of the rejection of fully one-third of the whole number of candidates, affords conclusive evidence of the danger to which the public must have been exposed, by the employment of so large a proportion of unskilled persons as assistants in the business of selling drugs and compounding prescriptions, previously to the passing of the Pharmacy Act.

"During the year 1870 I was present at the Pharmaceutical examinations on thirteen occasions, namely, on January 7th and 19th, on February 16th, April 20th, May 6th and 25th, July 1st and 13th, October 19th and 20th, and on December 2nd, 21st, and 23rd. Four of these were modified examinations, and the remaining nine major and minor examinations.

"No change requiring mention has been made during the past year in the mode of conducting any of the examinations, but I observe some minor improvements in method, and I am led to believe that it is the intention of the board of examiners gradually to raise the standards of competence both for the minor and major examinations. I have no suggestions to offer on this head with reference either to the minor or the modified examination, both of which appear to me to be as high as could be enforced with advantage at the present moment. But with reference to the major examination I would venture to suggest that, as the candidates for this examination are already qualified to carry on business as chemists and druggists, there would be no hardship in fixing the standard for passing it somewhat higher; thus making a greater difference than now exists between the grade of chemist and druggist and that of pharmaceutical chemist, and ensuring in those who bear the latter title a higher degree of pharmaceutical skill. I am of opinion further that, inasmuch as the increase of practical pharmaceutical skill is what will most conduce to the service of the public, the standard of the major examination should be heightened principally in its practical aspects, and that especially a profounder acquaintance with practical chemistry and a more thorough grammatical knowledge of Latin should be required. With this view I would recommend that candidates for this examination should be required to estimate practically, by means of the volumetric tests solutions appended to the British Pharmacopœia, the strength of such officinal preparations as are directed to be so estimated, and also to show considerable proficiency in reading difficult or unusual prescriptions written in the Latin language. I have, indeed, reason to believe that it is the intention of the board of examiners to carry out these improvements as they shall find practicable, but I hope that this expression of opinion on my part may strengthen their hands and assist them to realize their intentions more speedily.

"In conclusion, I have much satisfaction in being able to report that the examinations of the Pharmaceutical Society, as conducted during the past year, afford a sufficient guarantee for the competence of persons admitted during that period to registration under the Pharmacy Act of 1868."

Medical Gleanings.

THE late meeting of the British Medical Association at Plymouth was productive of some good contributions to medical literature. Notably so were the paper by Inspector-General Dr. John Murray on Cholera, and the address of Professor Lister, of Edinburgh, who, in two hours, delivered a most eloquent address describing discoveries in surgery. He was listened to with breathless attention while he described his steps in following up Professor Tyndall's discoveries regarding the putrefying qualities of dust particles in the air—a discovery which a few years ago startled the whole public, and the meed of sympathy which the speaker's remarks received showed that the audience were convinced from what was laid before them that the air is full of self-generating particles, which act upon open wounds by putrefying them. The manner in which these particles may be kept from the wounds by the use of a spray composed of carbolic acid and water—one of the acid to 100 of water—the modes of dressing adopted, and the wonderful cures effected, were related by the Professor in well-chosen language, and he disarmed all criticism by relating facts in proof of the efficacy of the treatment now adopted by him—facts given by contrasting the present with the past history of hospitals and other institutions in different parts of the kingdom.

In his paper on Cholera Dr. Murray reminded his hearers that, as the disease was regularly advancing from India, through Russia and the Baltic ports, towards England, its arrival here might be shortly anticipated, and as August and September were the months during which the last three epidemics prevailed in England, it was time for every precaution to be taken to guard against its attack. He then proceeded to relate his experience of the disease in India since 1833, in the hope that it might be useful. He urged the necessity of early attention being given to the first symptoms, and these he said were *malaise*—namely, a depression of spirits, want of appetite, torpidity of the bowels, and a desire for stimulants. He then entered at great length into the further progress of the disease, and inclined to the opinion that cholera was contagious, and was communicated from one person to another, especially where there was want of water, where bad water was in use, and where there was overcrowding. He thought that the disease was probably that which formerly appeared under the name of "plague," "black death," or "sweating sickness," and its effects were aggravated by want and bad food. In regard to its treatment, he pointed out the advantages of keeping up the spirits of the patients, and then he stated that opium, astringents, and alcohol lay inert on the stomach when collapsed by the disease, and the free use of these remedies at some stages caused death, either by preventing reaction, or by causing local complications if reaction should appear. The erect posture in bed, too, he said, was often fatal to a patient who would have recovered if he had maintained a recumbent position. He advocated the use of cold water in small quantities, and a little soda or carbonate of ammonia might be added with advantage. Liebig's extract of meat, made fresh and frequently given, had been attended with marked advantage.

At this meeting, Dr. Charlton, of Newcastle, was the retiring president, Dr. Whipple, of Plymouth, occupying the chair after Dr. Charlton's valedictory address. Birmingham was chosen as the place of meeting for next year, and on Dr. Baker of that town the honour of the presidency was conferred.

The *Times* newspaper has introduced to public notice what it terms "a very peculiar case." A young woman near Preston has existed for sixteen months with "no food at all, the only thing she could bear being a drop of water with which to moisten her lips. She is frequently asked if she will not have food, but always refuses it; she had no desire for it, and how she has for such a long period existed without anything possessing the least affinity to meat is a mystery. She is conscious, but very weak, gets a little sleep, and cannot bear a lighted candle in the room at night-time. It is supposed that she is suffering from abdominal atrophy; but the exact nature of the case is not positively understood, and it puzzles every one who is made acquainted with it, and especially when it is recollected that for a year and four months she has not had as much meat and drink as would have been requisite to sustain an infant a single day." The most "peculiar" part of this case is, that any educated editor should publish it as a fact.

At Melbourne (Australia) recently, a testimonial was presented to Professor Halford, in recognition of his scientific labours in connection with the treatment of snake-bite, and other analogous poisons, by the injection into the veins of Liquor Ammoniæ. The testimonial consisted of the rather curious sum of £117 4s. 5d. When we come to odd coppers like that, in a land of gold too, it looks as if every nerve of the country had been strained to its utmost. The young colony has tried very hard to raise its professor to the rank of Harvey and Jenner as a discoverer, but experience has hardly seemed to justify the high hopes which Dr. Halford at first entertained of his remedy.

We have found the following remarks on stammering in a foreign paper, and although they do not originate from a medical source, seem to find a very proper place in this connection. Moreover, they seem sensible, and probably useful:—

"No stammering person ever found any difficulty in singing. The reason of this is, that by observing the measure of the music—by keeping time—the organs of speech are kept in such position that enunciation is easy. Apply the same rule to reading or speech, and the same result will follow. Let the stammerer take a sentence, say this one, 'Leander swam the Hellespont,' and pronounce it by syllables, scan it, keeping time with his finger, if necessary, letting each syllable occupy the same time, thus, Le—an—der—swam—the—Hel—les—pont, and he will not stammer. Let him pronounce slowly at first, then faster, but still keeping time with words instead of syllables, and he will be surprised to find that, by very little practice, he will read without stammering, and nearly as rapidly as persons ordinarily talk or read. Then practice this in reading and conversation until the habit is broken up. Perseverance and attention are all that is necessary to perform a perfect cure."

The Rev. Dr. Haughton, Fellow of Trinity College, Dublin, is a gentleman of the most versatile talents, and of the most undoubted courage. He is both a clergyman and a physician, and is at the same time an authority on all anatomical matters, and one of the chief zoologists living. He is the secretary to the Zoological Society in Dublin, and in that capacity, combined with his surgical skill, has more than once "bearded the lion in his den" in a perfectly literal sense. Lately, however, a very large lion went to Dublin, and Dr. Haughton's courage was again called into requisition. The Lord Lieutenant's secretary wrote to Dr. Haughton, asking him to summon a meeting of the Council on Sunday to receive the Prince of Wales and the rest of the Royal party. Dr. Haughton wrote a very polite rejoinder, saying he would do nothing of the kind. The secretary called on Dr. Haughton, believing there must be some mistake, but was informed there was no mistake on *the Doctor's part*. The Prince of Wales was quite at liberty to visit the gardens on a Sunday like other people, but the reverend secretary saw neither the necessity nor the propriety of calling together the Council on that day in order to give him a formal reception.

THE HIPPOCRATIC OATH.

THIS time-honoured introduction to the medical profession, which is still administered in many foreign schools, and which might well replace, as it embodies, all codes of ethics, has undergone various modifications since its author's day. The Leyden version, the Latinity of which is questionable, runs as follows:—

"Testor Deum Omnipotentem, me hoc Jurisjurandum pro virile servaturum.

"Præceptores, qui Medicam Artem me docuerunt, et ad supremum in illa honoris gradum evexererunt, Parentum loco habiturum.

"Victus rationem Ægris commodam et salutarem præscripturum.

"Nullius intercessione, nec sponte, noxidum Pharmacum cuiquam propinaturum; sed sancte et caste Vitam Artemque meam instituturum.

"In quascunque Domas intravero, ad ægrotantium duntaxat salutem ingressurum, et ab omni injuria inferenda procul futurum.

"Quæcunque inter curandum videro audiverove, si quidem ea eferri non expediat, silentis suppressurum.

"Hocce Jusjurandum integre servanti mihi et Vita et Arte feliciter frui contingat; sin sciens fefellero et pejereravero, contraria eveniant omnia."

At Utrecht, the form is briefer, and reads thus:—

"Sancte promitto, me eos qui me artem medicam docuerunt, in eaque instituerunt, vel promoverunt, Parentum loco habiturum et honoraturum; academia ultrajecturæ decus et incrementum pro virile promoturum. In tractandis Ægris, Diæta, ollisque Remediis, quantum ingenu viribus assequar, ex Ægrorum commodo usurum nec prece, nec pretio, aliave de causa, Pharmacum calamitosum cuiquam propinaturum; nec gravidæ abortum procuraturum.

Audita vel visa intercurandum, nat enuncianda, silentio involuturum. Et in his omnibus pietati, honestati, et conscientiæ integritati, operam daturum. Hæc si sincere præstitero, felix mihi, per Deum, Vito et ars esto; sin minus, adversa mihi eveniant omnia."—*American Medical Gazette.*

PHARMACOLOGICAL INQUIRIES.

In the *Admiralty Manual of Scientific Inquiry*, published by authority of the Lords of the Admiralty (4th edition, recently issued), there is printed a series of inquiries relating to Pharmacology and Economic Botany, which has been compiled by Messrs. D. Hanbury, F.R.S., and D. Oliver, F.R.S. A clear statement of our ignorance on such matters is the first step towards its removal, and we are not without hope that some of our readers abroad will help in the scientific labours suggested. Information on any of the subjects may be communicated to Professor Oliver, Royal Gardens, Kew, or to Mr. Hanbury, Clapham Common, London.

ASIA MINOR, ARMENIA, AND PERSIA.

Gum Tragacanth is produced in Asia Minor by several species of *Astragalus*, which it is desirable further to identify. Travellers and others who have the opportunity should preserve specimens of any species *seen* to yield the gum, as well as specimens of the gum itself; noting at the same time whether the latter was obtained from incision in the stem, or whether exuded spontaneously. Fine gum tragacanth is produced at Caissar (or Kaisarieh) and Yalavatz, in Asia Minor, at which places the practice of making longitudinal incisions in the stem of the shrub is adopted; the gum is also collected at Isbarta, Bourda, Angora, &c.

Gum tragacanth is frequently adulterated with another gum, which has been called *False Tragacanth, Hog Gum, Bassora Gum*, or *Gum Kutera*. At Smyrna it appears to be known as *Caraman Gum*. What is its origin? One of its properties is to swell up into an opaque mass upon being placed in water, in which, however, it does not dissolve.

Storax.—None of the Storax found in commerce in modern times is derived from *Styrax officinale*, L.; yet it is certain that this tree is capable, under favourable circumstances, of yielding a highly fragrant resin which was once much valued. Authentic specimens of this resin, which is the original and legitimate *Storax*, are much desired. It was formerly produced in the south of Asia Minor, where the tree is still found in abundance.

Salep.—Obtain specimens of the different plants which yield salep in Asia Minor and Persia, and especially of those that afford the best kinds.

Larch Agaric (Polyporus officinalis, Fries.).—This fungus now comes from Northern Russia, where it grows on the stems of *Larix sibirica*, Ledeb. During the middle ages it was exported from Asia Minor; and in the Paris Exhibition specimens from this region, that is to say, from the Gulf of Adalia, were exhibited. What is the tree from which this Asiatic Agaric is obtained?

Assafœtida. — Although the ordinary assafœtida of commerce is doubtless the produce of *Narthex Assafœtida*, Falc., there are some varieties of the drug which, it is reasonable to conclude, are derived from other species. One of those sent from India to the Great Exhibition of 1851 was a brown pellucid gum resin, containing pieces of the stalk of the plant, and differing considerably from ordinary assafœtida.

Sagapenum, a gum-resin resembling assafœtida, but not acquiring a pink colour upon exposure to the air, and not so strong an alliaceous odour. As it is occasionally shipped from Bombay, it is presumed that it is produced in Persia. Though it has been used in medicine for ages, its botanical origin is not ascertained; from analogy, however, we may infer that it is the produce of some large plant of the Natural Order *Umbelliferæ*. Compared with assafœtida and galbanum, sagapenum is a rare and costly drug.

Galbanum.—The remarks we have made upon sagapenum apply, to a great extent, to the gum-resin known as *Galbanum*. Galbanum is, however, a far more abundant substance than sagapenum. It occurs in trade in two varieties, which are so distinct as to lead to the inference that they are yielded by distinct plants. Galbanum is said to be imported into Russia in large quantities by way of Astrachan, but that which reaches England comes principally from Bombay.

Opoponax, another fœtid gum-resin, the produce according to most authorities, of *Opoponax Chironium*, Koch, a large umbelliferous plant, native of the South of Europe, and of Asia Minor. There is no modern account of the collection of this drug, nor is its place of production ascertained.

AFRICA—WEST COAST.

Copal.—Sierra Leone copal is produced by *Guibourtia copallifera*, Bennett, *Kobo* of the natives: of this tree, which is not well known, specimens, including the ripe pods, are requested; it grows at Goderich and in other localities near Sierra Leone.

Grains of Paradise.—Although *Amomum Melegueta*, Roscoe, the plant which yields this drug, is now well known, there are some interesting species nearly allied, with which botanists are very imperfectly acquainted. It is, therefore, desirable to procure specimens of such plants from various parts of the West Coast of Africa. These specimens should comprise the flowers and fruits, as well as the foliage. As the flowers are very delicate, it is necessary to preserve them in spirit of wine Some specimens of the fruits should also be preserved in the same manner. As the species often grow intermixed, and as flowers and fruits are produced at different seasons, special care is requisite to avoid confusion.

African Turmeric is said to be the rhizome of *Canna speciosa*, Rosc., but further investigation is desirable. Living roots might easily be procured at Sierra Leone, and sent to England for cultivation.

African Mammee (Ochrocarpus africanus, Oliv.), native of Sierra Leone and Prince's Island. Specimens of the tree, and (in alcohol) of the fruits, which are as large as an orange, are requested.

Bitter Kola of Fernando Po.—The common *Bitter Kola* (*Cola Nuts*), largely used by the natives of West Tropical Africa, is known to be the produce of a wide-spread tree, *Cola acuminata*, Br., but the origin of the *Bitter Kola* of Fernando Po is still uncertain. There can be no doubt that it is the seed of a Guttifer (*Garcinia* or *Xanthochymus*), so it must be sought on a tree with strictly opposite leaves; the seeds probably contained in a pulpy fruit.

Balsam of St. Thomas is the name of a tree growing in the Island of St. Thomas, in the Gulf of Guinea. Specimens in flower and fruit, also of the resin, if it affords such, with information as to the mode of procuring it, would be acceptable. It is probably a species of *Sorindeia*.

Bitter Wood.—A species of *Quassia* (*Q. africana*, Baill.) is found in the Gaboon and Camaroons rivers. Specimens of the wood are required to show whether it may serve as a substitute for the Tropical American species (*Q. amara*).

What is the **Kpokpoka** tree of West Tropical Africa, from the fibre of which the "dodo" cloth is prepared? Specimens in flower are wanted.

Specimens in flower or fruit of any shrubs or trees of Upper Guinea, affording elastic gums, *india-rubber* or *gutta-percha*, with accompanying gum and mode of its collection, are particularly requested.

AFRICA—EAST COAST, INCLUDING THE RED SEA, ARABIA, AND MADAGASCAR.

Myrrh.—This celebrated drug is collected in great quantities by the Somali tribes on the African coast, near the southern extremity of the Red Sea, whence it is brought to Aden for shipment to Bombay. A variety of myrrh, which is probably yielded by another species, is also produced (according to Vaughan) in a district lying forty miles to the east of Aden, to which place it is brought for sale. A third variety, distinguished by the Arabs as *Bissa Bol*, is also collected by the Somali tribes, and sent by way of Aden to India. It is a point of much interest to determine with accuracy the plants which afford these several sorts of myrrh, and for this end it is earnestly requested that those who have any opportunity for investigating the subject will not neglect to do so.

OLIBANUM.—The Olibanum found in European commerce is produced partly on the African coast, near Cape Gardafui, and partly on the southern coast of Arabia, whence it is shipped to Bombay. There is still some doubt about the various species of *Boswellia* which yield the drug, and additional specimens, including flowers and mature fruits, are desired.

KORARIMA CARDAMOM is the name under which the late Dr. Pereira has described an Abyssinian cardamom, having the shape and size of a small fig, which is exported from Mussowah, a port at the southern end of the Red Sea. This drug, which has long been known in medicine, is perforated at the smaller end, and, when strung upon a cord, is commonly used by the Arabs and Abyssinians as beads for their *mesbehas* or rosaries. It is said to be brought to the market of Baso, in Southern Abyssinia, from Tumbé, a country situated in about 9° N. lat. and 35° E. long. The plant, for which the name *Amomum Korarima* has been proposed, is entirely unknown.

DRAGON'S BLOOD, of the Island of Socotra.—By what plant is it afforded?

CATHA EDULIS, called in Arabic *Kat*. A large supply of the dried leaves of this shrub, say one hundred pounds, should be procured for chemical examination. The plant grows in Southern Arabia and in Abyssinia.

KAMALA.—A peculiar sort of Kamala, evidently not derived from *Rottlera tinctoria*, Roxb., has been imported from Aden. Nothing is known of its place of growth, or of the plant by which it is afforded. ("Pharm. Journ.," ix., 1868, 179.)

KOUSSO.—Fresh seeds of the Kousso tree, *Brayera anthelmintica*, Kunth, should be procured for cultivation.

GUM ARABIC.—*Acacia Verek*, Guill. et Perrott., a tree growing all over the northern part of Central Africa from Senegambia to Abyssinia, is said to produce the best sort of gum arabic. Fragments of the stem, with the gum exuding, from Western as well as from Eastern Africa, are requested, in order to ascertain the identity or diversity of the gum produced by one and the same plant in different localities.

CALUMBA ROOT.—Whether this drug is furnished wholly by *Jateorhiza Columba*, Miers, or in part by *J. Miersii*, Oliv., both of them plants of Mozambique (but the latter found also in Madagascar), is not known. Travellers visiting the localities where the drug is collected should obtain good specimens of the plant, as well as living roots, which are fleshy, and easily transported without earth.

TANGHIN of Madagascar (*Tanghinia venenifera*, Poir.).—A specimen is requested of the poisonous milky juice. A portion should be partially dried with a gentle heat; another portion should be mixed with spirit of wine and sent in a fluid state.

CAOUTCHOUC, OR INDIA-RUBBER.—In Madagascar, as well as in Mozambique, there are several trees said to yield this substance. Good specimens and definite information should be collected.

INDIA, SIAM, AND THE INDIAN ARCHIPELAGO.

CATECHU.—Observe the processes by which the various kinds of *Catechu*, *Cutch*, *Terra Japonica*, and *Gambir* are obtained; and, if from trees, whether from others beside *Acacia*, *Catechu*, *Areca Catechu*, and *Uncaria Gambir*. We wish to identify the trees with the respective extracts.

What is the source of Pegu Cutch, especially?

BENZOIN, OR GUM BENJAMIN.—It would be interesting to obtain good specimens of the tree which affords this drug in Siam in order to compare them with *Styrax Benzoin*, Dryand., which produces the Benzoin of Sumatra.

CAMPHOR OF BLUMEA GRANDIS, D.C.—Some pounds of it are desirable, in order that its nature may be investigated. (See "Pharmacopœia of India," p. 128.)

MISHMI BITTER, OR MISHMI TITA.—The small yellow rhizome of *Coptis Teeta*, Wall., a drug known in medicine since a remote period, is produced in the Mishmi mountains to the east of Assam, and probably also somewhere on the confines of China further north. The plant which yields it is very little known, and complete specimens are desirable. It is possible that some second species may furnish a portion of the drug.

ACONITE ROOT has been imported in considerable quantities from India. In what district is it collected, and from what species of *Aconitum*?

AROMATIC BARKS, known as CULITLAWANO, MASOY, and SINTOC, derived from trees of the order *Laurineæ*, are objects of considerable trade in the Indian Archipelago. The traveller should embrace the opportunity, when it occurs, of seeing the bark collected, and of obtaining authentic specimens of it, and of the tree yielding it. Masoy Bark is produced on the west coast of New Guinea.

SALEP.—The tubers of several species of *Orchis* and *Eulophia* are collected and sold in India under the name of Salep. It is desirable to ascertain what species of Orchidaceous plants furnish this substance, especially in the Himalayas and in Cashmere. What is the plant which affords the drug called *Badshah Saleb*, or Royal Salep? Where is it produced, and for what purpose is it valued? It has been exported to England from Bombay.

MANNA.—It has for many years been asserted that a kind of manna is produced in the East on a species of Tamarisk. It requires to be determined whether any oriental Tamarisk yields a saccharine substance of the nature of manna, and whether it is collected, and where?

HEMP.—A very rough but tenacious hemp is produced in Northern India at Kangra and elsewhere, and bears the name of "*Kangra hemp*," or "*Himalayan hemp*." Is this the produce of *Cannabis sativa*, of which there is some doubt?

TANYIN.—What is the source of the "*Tanyin fruit*" of the Burmese Trade Lists, and what its uses?

MOCHARAS.—This brown astringent substance, which is found in the bazaars of India, is said to be partly derived from *Salmalia Malabarica*, part is said to be an exudation from the trunk of the Areca palm (*Areca catechu*). It would be well to ascertain if any astringent substance is exuded, or whether any galls are formed, as some suggest, on *Areca catechu*. The source, or sources, of the *Mocharas* should be determined.

RAJAH CANES, exported from Borneo. The species of palm yielding these is unknown.

What tree affords the so-called *Amboyna* or *Kyabocca* wood?

GUTTA PERCHA is, even up to the present day, little known. It is said to be yielded by several plants, such as species of *Isonandra*, *Chrysophyllum*, *Sideroxlyon*, and others. Attention should be paid to the vernacular names, such as *Gutta-percha Ugiato putih*, *Kotian Tuban*, or *Taban*, &c. Abundant and carefully preserved wet and dry specimens of the leaves, flowers, and fruits of the different kinds, the products of the same individuals from which the dried specimens are obtained, are greatly needed.

CAOUTCHOUC, OR INDIA-RUBBER.—In the Malayan Archipelago there are many trees which yield Caoutchouc. *Urceola elastica* is the source of the Borneo India-rubber.

What trees produce the so-called Singapore rubber, and the Java, Sumatra, and Siam kinds? Are they species of *Ficus*?

In Assam *Ficus elastica* is the chief, if not the only source of india-rubber. But *Ficus laccifera* may also yield it. Is any india-rubber collected from the latter, and is it kept separate or mixed with that of *F. elastica*? Specimens of each, accompanied by good dried specimens, would be valuable. Are there no other trees capable of yielding india-rubber in quantity? *Willughbeia edulis*, the "*Luti-am*" of Chittagong and Silhet, is said by Roxburgh to yield good india-rubber. Specimens of the india-rubber, and also carefully prepared and abundant specimens of the leaves, flowers, and fruit, both dried and in spirit, are much needed.

CHINA, COCHIN CHINA, AND THE PHILIPPINES.

RHUBARB.—The true source of the rhubarb produced in the western provinces of China and the adjacent regions is still unascertained. It is desirable to obtain living roots or seeds of the plant, as well as a full account of the collecting and drying of this well-known drug.

CAMPHOR.—That of commerce is obtained from Formosa and Japan. Is any produced in China, and where? The Camphor Laurel (*Cinnamomum Camphora*, Nees.) is well known to flourish in many localities of the central provinces.

What is the camphor said to be obtained from a species of *Artemisia* (wormwood) called Ngai? A few pounds of it are desired.

CHINA ROOT is exported to Europe from Canton. The plant is said to grow in the provinces of Honan, Kwangtung, and Kwangsi: good specimens of it are desired.

Root called *Green Putchuk* (*Pă-chĭh*), of which large quantities are exported from Ningpo. The plant is an *Aristolochia*: to determine the species, pressed and dried specimens with roots would be acceptable.

Cassia Bark.—Specimens are much desired of the tree which affords this bark in the south of China. Botanical specimens should in all instances include good samples of the bark, young and old, obtained from the same tree.

Cassia Buds.—These are the immature fruits of a *Cinnamomum*, supposed to be that affording the Chinese Cassia bark.

Bamboo.—Specimens in flower of a bamboo, affording the broad leaves which are pinned together by the Chinese to line tea-chests, are required to determine the species.

Star Anise.—Information should be collected by an eye-witness as to the production in Southern China of this spice. It is said to be brought to the Canton market by the Fokien junks. Botanical specimens of the tree, and full particulars regarding the collection of the fruits, are desirable.

Chinese Oil of Peppermint (so-called) is said to be distilled at Canton. Pressed and dried botanical specimens of the plant *seen* to be used should be sent to England for determination of the name.

Cardamoms.—What is the origin of the cardamom called by the Chinese *Yang-chun-sha*, the *Hairy China Cardamom* of pharmacologists? It is said to be produced in the province of Kwang-tung, and it may be a native of Cochin China.

Nothing is known of the origin of the scitamineous fruit to which the name *Large Round China Cardamom* has been given, and which is known to the Chinese as *Tsaou-kow*. The same remark applies to the *Bitter-seeded Cardamom*, *Yih-che-tsze*, and *Ovoid China Cardamom*, *Tsaou-kwo* or *Quâ-leu*; it is probable that all of them are productions of the south of China, or of Cochin China.

St. Ignatius' Beans, called in the Philippines *Coyacoy*, or *Pepita de Catbalogan*. The plant, said to be a climbing shrub, to which the name *Ignatia amara* was given by the younger Linnæus, is a species of *Strychnos*, probably unknown to modern botanists. It is believed to grow in Bohol and Cebu, islands of the Bisaya group of the Philippines. As it is one of great interest, no opportunity should be lost for procuring abundant flowering specimens, as well as the entire fruits, both dried and preserved in alcohol, and some considerable pieces of the stem with the bark attached.

Elemi.—This resin is abundantly produced in the forests of the Philippines, where it often assists in giving a cheerful blaze to the fire of the traveller. It is also exported from Manilla as a drug. The tree that affords it is probably a *Canarium*, but it is desirable to have complete specimens, including flowers and mature fruits in alcohol, in order to ascertain the species with exactness.

MEXICO, THE WEST INDIES, CENTRAL AND SOUTH AMERICA.

Mexican Elemi, known in Mexico as *Copal*, is yielded by *Elaphrium elemiferum*, Royle, a tree growing near Oaxaca, good botanical specimens of which are much desired.

Sarsaparilla.—The species of *Smilax*, the roots of which constitute the various sorts of sarsaparilla found in commerce, are very imperfectly known. Good botanical specimens, comprising flowers, fruits, and leaves, and accompanied by the stem and roots, should be carefully preserved, and transmitted to England for determination. The so-called *Jamaica Sarsaparilla* grows near the Chiriqui Lagoon, in the state of Costa Rica, and a species very similar, if not identical with it, at Bajorque, on the Rio Magdalena, New Granada. Other sorts of sarsaparilla are produced in Mexico, Guatemala, Honduras, Brazil, &c.

Cinnamon of Ecuador.—This bark, which resembles the cinnamon of Ceylon, is produced by a noble tree growing in the province of Canelos. Specimens of it, including flowers and the large fruits preserved in alcohol, are much desired. The calyx of the fruit is used as a spice under the name of *Ishpingo*.

Balsam of Copaiva is imported from several parts of Brazil; it varies somewhat in properties, and is the produce of several species of the genus *Copaifera*. It is desirable to obtain the balsam of each species, with a specimen in flower and leaf, and, if possible, in fruit, of the tree affording it, and the name of the district where the tree grows, and its native appellation there.

Woods.—Lignum nephriticum—This rare wood, noticed by some of the earliest explorers of America, is a production of Mexico. To what tree is it to be referred? Its infusion is remarkable for having the blue tint seen in a solution of quinine.

Satin-wood of the West Indies.—Specimens in flower and fruit, with the wood, are requested. The origin of the *Coca*, or *Cocus wood* of the West Indies, is also uncertain. Specimens in flower of any tree affording the lancewoods of commerce in the West Indies or Central America are needed for the determination of the species.

King-wood, Maracaybo Wood and Mustaiba Wood, all imported from Brazil, and Nicaragua Wood from Central America, are of unknown botanical origin.

The Rose-woods of Brazil.—There is still some doubt as to the trees which yield the different varieties of this timber.

Ipecacuanha.—What is the plant which furnishes the *large Ipecacuanha root* of New Granada?

Pareira Brava.—The plant affording the inert woody stems which constitute the *Pareira Brava* of commerce, and which are exported to Europe from Rio de Janeiro, has not been ascertained, neither is the locality in which it grows accurately known. The subject is deserving of investigation.

Cinchona Bark.—In addition to the bark of *Cinchona Tucujensis*, shipped at Puerto Cabello in Venezuela, there are others less known botanically which are brought from the same port. Some of these barks appear to be derived from varieties of *Cinchona cordifolia*, while others seem to belong to what is called *Quinquina* rose d'Ocaña. It would be interesting to have authentic specimens of the flowering and fruit-bearing branches of the trees, together with sections of the branches and trunk (the bark being *in situ*), for comparison with the species described by Karston.

The so-called *False Cinchonas* may be distinguished, according to Dr. Weddell, by their capsules, which are generally large, and having valves which separate from the apex towards the base. The flowers are relatively large, and devoid of perfume. It would be of some interest to have authentic specimens of the barks of those trees belonging to the genus *Bucna* (*Cascarilla* or *Ladenbergia*), in order to ascertain whether they contain alkaloids or not. The barks ought to be accompanied by flowering specimens. Some pounds of each bark would be required for chemical examination.

Para Rhatany.—This root, imported from Para in Brazil, is described in the *Pharmaceutical Journal*, i., 1870, 84. The plant yielding it should be ascertained, for which purpose good specimens, including *entire roots*, are requisite.

Milk or Cow Tree of Para.—Specimens in flower and fruit of this tree, which is called *Massaranduba*, are required for the accurate determination of the species.

Caoutchouc, or India-rubber.—All the Central American caoutchouc is presumed to be obtained from *Castilloa elastica*, the "*Ule-ule*" tree. Are there any other species of this genus, or trees likely to be mistaken for *Castilloa elastica* sources of supply? In New Granada there is said to be a pinnate-leaved tree yielding caoutchouc—what is it?

Hevea (Siphonia) Braziliensis is the chief source of Para india-rubber, but other species yield it, as *H. Lutea*, *H. discolor*, *H. paucifolia H. rigidifolia*. It would be exceedingly desirable to know the relative yield of these several trees, and to obtain good specimens of them.

In Pernambuco and Ceara there is much good india-rubber said to be the produce of *Hancornia speciosa*, the "Mangaba" of the Brazilians. Reliable specimens and information are desired.

In British and French Guiana caoutchouc trees exist, good specimens of which, with their several products, should be collected.

Glycerine in Pills.—The *Pharm. Zeitung*, No. 10, has been informed that pills containing glycerine cannot be silvered or gilt, since the lustre of both metals at once disappears, rendering the pills unsightly. Hager states that this occurs only with recently prepared pills, and with older pills if prepared with an excessive quantity of glycerine. Two, and for quinia and iron three, drops of glycerine are sufficient for thirty pills.

Homœopathy.

HOMŒOPATHIC CHEMISTS AND THE PHARMACEUTICAL SOCIETY.

THE following discussion took place at the last meeting of the Pharmaceutical Council (September 6th, 1871). We extract the report from the *Pharmaceutical Journal*:—

"Moved by Mr. Williams, seconded by Mr. Betty,

"That the following registered chemists and druggists be elected members of the Society:—

Edward Gould	Bromley.
John Middleton Wyborn...	Bromley.

"Mr. Groves called attention to the fact that these names had been submitted to the Council for election on a previous occasion, and stated that he still objected to their election on the ground that they were homœopathic chemists.

"Mr. Williams said that Mr. Gould had spoken to him on the subject, and he certainly did not think they were acting fairly in not electing him. He was a man of standing, and he did not think they ought to draw a line and say they would not admit homœopathic chemists. Many of their members sold homœopathic medicines; and as Mr. Gould said, it was a most absurd thing that he should not be a member of the Society when some of his assistants were pharmaceutical chemists or chemists and druggists. Mr. Gould was properly registered under the Act, and claimed, as he thought rightly, to be elected a member of the Society. He brought it forward as a matter of principle.

"Mr. Groves said that equally as a matter of principle he should vote against the motion.

"Mr. Carr said he should do the same.

"Mr. Edwards asked if there were any homœopathic chemists members of the Society.

"The Secretary said he believed not.

"Mr. Groves said the Society was one of pharmaceutical chemists; these men did not use the same Pharmacopœia, or the same drugs, nor had they anything to do with the Society. They might as well admit hydropathists.

"Mr. Williams thought that under the Act of Parliament they were almost bound to elect any one properly placed on the register.

"Mr. Atherton said they were not bound to admit anybody.

"Mr. Edwards said the Act made a great distinction between matters for the public benefit and matters affecting their own internal arrangements as a Society. If a man passed a certain examination he was entitled to call himself a pharmaceutical chemist, and have all rights accruing to him as such, but making him a member of the Society was optional.

"Mr. Bottle read clause 18 of the Act, 1868,—'Every person who at the time of the passing of this Act is or has been in business on his own account as a chemist and druggist as aforesaid, and who shall be registered as a chemist and druggist, shall be *eligible* to be elected and continue a member of the Pharmaceutical Society according to the bye-laws thereof.'

"Mr. Betty seconded the motion. He thought, under the words of the eighteenth clause, they were morally bound to elect any properly qualified person, because he recollected there was a long discussion on the meaning of the word 'eligible' prior to the passing of the Act, and Mr. Sandford, the then President, stated that that word meant that there was a moral right in the persons referred to to be elected. Indeed, after communication with Mr. Flux upon the subject, he believed Mr. Sandford went so far as to say that with that word in the Act of Parliament there was a legal right, and he stated distinctly that he should have no objection to substitute the words 'shall have a right.' Again, they called themselves the Pharmaceutical Society, and according to etymology that included all who ministered to the public wants with regard to curing diseases. They had nothing to do with the manner in which those diseases were cured; homœopathic chemists dispensed the prescriptions of duly qualified medical practitioners, and he did not see how they could properly be excluded. If they cured diseases by a method which the old school did not think the best, that had nothing to do with the Pharmaceutical Society. He thought, therefore, they were morally bound to elect these gentlemen; and if there was no legal right, they should certainly act in a liberal rather than in a narrow spirit. At any rate he should like to hear some reason given for refusing to elect them.

"Mr. Hills said his reason for voting against the election was that he did not think these gentlemen would do the Society any good, or that they would get any good from it. It might cause contention in the educational department, for they might wish to introduce lectures on homœopathic pharmacy.

"Mr. Stoddart thought there would never be many of these men applying for membership, and they would not dream of instituting homœopathic lectures.

"Mr. Hills said that if he were a homœopathic chemist and a member, he should certainly bring it forward, and try to introduce it.

"Mr. Williams said that generally speaking homœopathic chemists were very well educated scientifically; indeed, rather above the average of chemists and druggists.

"Mr. Sutton said his experience was quite the contrary.

"Mr. Groves said if the Council acknowledged the status of these men, he did not see how they could draw the line, and refuse to put on the register booksellers and others who had sold homœopathic medicines prior to the passing of the Pharmacy Act.

"Mr. Williams said that was a distinct point. There was no question about the propriety of these men being on the register.

"The motion was then put, and the following division took place:—

"*For*—Messrs. Betty, Bottle, Savage, Stoddart and Williams (5).

"*Against*—Messrs. Atherton, Carr, Greenish, Groves, Hills and Sutton (6).

"The motion was therefore lost."

PHYSICIANS IN COUNCIL.

The British Congress of Medical Men practising Homœopathy is to be held at Oxford on Wednesday, the 27th September, at the Randolph Hotel, Beaumont-street. Dr. Madden, as president, will deliver an address on "The Relation of Therapeutics to Modern Physiology." Papers are also expected from Drs. Black, Moore (Liverpool), Dunn (Doncaster), and Wynne Thomas (Birmingham). No paper, with the exception of the President's address, is to occupy more than twenty minutes in reading. The observations of members in the discussions following the paper will, it is expected, be limited to ten minutes each.

Having concluded their scientific consultations, the members of the British Congress of Medical Men practising Homœopathy will proceed to make some practical experiments on the process of digestion.

HELMBOLD'S LATEST.

THE American press generally looks on Dr. Helmbold very lovingly; not only on account of his patronage, which is something considerable, but also because his spirit and originality really win the hearts of these editors. And the journalists who do not come to love Helmbold are sure to hate him, and are goaded into abusing him and his buchu occasionally; which satisfies the doctor, and helps his business just as well as if they took the more amiable view of him. Invigorating himself with a deep draught of the famous extract, he recently struck out a new plan of concentrating public attention, which is thus described in the *New York Citizen*:—

"Our famous doctor is an original; he has not only made up the most harmless medicines, but pushes them with the greatest skill of any of his tribe. He beats Bonner, who paid for his horses and increased the circulation of his *Ledger* by his cunning manipulation of public curiosity. Bonner used one horse, but Helmbold trumped him with five; Ayer, Brandreth, Lyon, and others disfigured some of our finest natural scenery, but Helmbold wrote the mystic word 'Buchu' over the entire country. He has brought his 'Diosma Crenata' home to every American's eyes, if not to his stomach, and offered our people—who are generally, however, unfortunately for him, troubled in a contrary way—the restoration of manly vigour on the easiest terms. Our papers resounded with the virtues of the new restorative, which was warranted as infallible in cases of 'indisposition to exertion'—a complaint that troubles a great many of us more than the "universal lassitude" for which it is also a panacea; 'loss of power,' whatever that may be; 'loss of memory;' 'difficulty of breathing,' which comes to all of us once, and then, we fear, is hardly curable, even by buchu in its double-distilled form; 'horror of disease,' which is really so common a complaint that somebody ought to have found a corrective for it long ago; 'dimness of vision'—and for this our near-sighted friends will be grateful—and many other and multiform diseases.

"Wherever the doctor went, he and his buchu produced an effect; they both worked freely. Long Branch rang with his fame, Washington could not suppress his ardour, and New York policemen were worried into a wild state with his team, which it appears was of doubtful legality, He was continually in the public press; and his name, if not his drugs, was in every man's mouth. But he got into trouble in reality, or as a ruse to arouse sympathy—we do not know which—he failed to pay his advertising bills; he kept the newspaper proprietors on tenterhooks as to the health of his estate, and the power of buchu to restore it to a sound condition and remove its 'general weakness.' Hence he was advertised more than ever; the press was deeply interested in his recovery, and uttered its hopes and fears loudly, and the people heard still more of buchu and Helmbold.

"But the great doctor was not satisfied; he had not yet done himself justice; although he had surpassed all other advertisers, he was still equal to greater achievements—he would beat himself. Then came his grand idea, his crowning inspiration; he committed suicide! This was a stroke of genius. Buchu must triumph, when its inventor imperils his life for it. 'Accidental death of Dr. Helmbold' appeared instantly on the bulletin-boards of every paper; the 'Suicide Dr. Helmbold' rang from the lips of all the little ragamuffins in our big city; 'Dreadful Loss to the Country' headed a hundred articles in the provincial newspapers. Buchu went off like wildfire; the fear of getting no more made it doubly precious; men who were still vigorous, but looked with terror to the possibility of 'universal lassitude' in old age, rushed for it; women with 'pallid countenances,' or "flushing of the body," laid in supplies against all time. The doctor's estate became solvent at once; the newspaper men saw their bills sure of payment; for, lo! and behold, the doctor was as well as ever, and the next morning he secured another gratuitous advertisement, because the previous rumours of his death had all to be contradicted. The truth was then announced to be that an old fowling piece—not the great medicine man—had gone off, as such things will, and the doctor was so alarmed at the noise that he required restoratives to settle his nerves. The only question now remains—and on this point it behoves him to do his character full justice—did he take buchu as his restorative under the circumstances or not? for if he did, a good many persons will follow his example, and a buchu toddy will become the fashionable tipple. However, whether he did or not, all the advertising mediums of the country must lower their heads before the grand master of the art who committed suicide as an advertisement."

OPIUM SMOKING.

IN San Francisco, which is so largely occupied by the Chinese emigrants, opium smoking is of course a considerable business. An opium den in that city is described in the *San Francisco Chronicle*, from which we extract the following:—

"It is rented by the proprietor to a Chinaman named Ah Fook for 500 dols. per month, who again sublets various parts. We entered several apartments, and a stranger sight cannot be imagined. The first we visited was about ten feet in height, sixteen feet in length and twelve feet in breadth; the only light or ventilation of any kind was by the door, and it was so dark that a candle had to be lighted to enable us to inspect it. This was a lodging-house—Heaven save the mark!—and kept by a man named Ah Wa, who for ten cents a night accommodates his countrymen with lodging; and in this place every night nineteen men sleep. The beds, if they may be so termed, are nothing but a series of shelves with a straw mat on each, and here, night after night, these poor wretches pass away their time smoking opium and sleeping off its pernicious effects, as the proprietor for five cents extra supplies this drug, the smoking of which occupies the chief part of the time of the inhabitants of McEvoy's building, when not engaged in their ordinary occupation of thieving, for Mr. Woodruff informed us that there was not one that frequented that place who was not a thief.

"We watched the operation of preparing and smoking a pipe of opium. The smoker has brought to him a tray on which is a light, a pipe, and a small piece of wire, and a jar of pure opium; the wire is dipped into the opium, then applied to the candle and cooked until the perfume arising therefrom suits the smoker's ideas. It is then carefully kneaded on the surface of the pipe, the top of the bowl being covered, with the exception of a small hole in the centre, and when the correct consistency has been gained by a delicate manipulation with the wire, the opium is worked up into a ball about the size of a small pea, and inserted through the lid of the pipe; the smoker then reclines, and placing the bowl of the pipe against the candle, draws away at the stem for a few seconds—the pipe is empty, and the performance repeated until the smoker becomes stupefied and falls back in a doze to revel in the sensations arising from the narcotic. Its effects are described as being of a most exhilarating kind, and if only inhaled in small quantities it animates the spirits and gives energy to the intellectual powers, and is then followed by a state of quiet, pleasant languor until sleep succeeds; but it is only by increasing the dose that these effects are reproduced. The soporific effects are then of longer duration and the symptoms of debility are greater, gradually but surely leading to softening of the brain."

DENTAL HYGIENE.

THE following are the most important paragraphs of an interesting lecture read before the Montreal Dental Society, by L. J. B. Leblanc, L.D.S.:—

Generally the teeth of the first dentition are not susceptible of any care for cleanliness, unless they be affected by decay, in which case they must be plugged, and brushed often in order to check the progress of that affection. It is at the age of seven or eight that children should be taught the habit of brushing their teeth twice or three times a week, with a soft brush, so as to provide against caries, and the pains, more or less smarting, resulting from it. By these means the teeth and the mouth are kept in the state of cleanliness and freshness which is so agreeable. In case the teeth should be covered with tartar, it would be necessary to remove it to avoid caries or inflammation of the gums. Another inconvenience of tartar is that it causes an offensive breath.

From the age of fifteen the teeth must be brushed every day, and with a powder well prepared, two or three times a week. The remainder of the times with a liquid acting like a tonic, which will dissolve in the same time the mucus deposited on our teeth while sleeping. Experience teaches that their daily cleaning is their best preservative. It would be more suitable to clean them after meals in order to remove the alimentary substances; and if particles of food are deeply placed in them, a tooth-pick should be used. There are parties who satisfy themselves with a piece of linen to rub their teeth without taking the precaution of rinsing the mouth. This is far from being the clean and proper way; on the contrary, it is very injurious, because a certain pressure is made on the gums, and that habit has no other advantage but that of gathering and hardening tartar in places where it is liable to accumulate itself, that is to say, between the teeth and their necks.

Persons wearing false teeth are not absolved from cleanliness, more than others; they should take great care of the mouth; if otherwise, the sets cover themselves with food and tartar, which remaining habitually in moist and warm places, become infected, and cause a great deal of inflammation to the mucous parts, and then the mouth becomes the seat of an intolerable smell. Unfortunately we have often the evidence of what I have just said. A man must despise himself to a great extent to keep so much dirtiness, and we, poor dentists, are often compelled to stand a good distance from these persons, and in spite of us, their breath, which is able to kill flies while flying, reaches us; we would not be so unlucky if nature had given them, as the alligators of San Domingo, under their lower jaw, the advantage of having a gland holding musk.

Though the rubbing of the teeth with a mere brush dipped in aromatized water is nearly always sufficient for maintaining the cleanliness of these organs, there are nevertheless persons, either by the nature of their constitution or by previous negligence, who are compelled to seek more energetic means, that is to make a great use of powders.

I shall say a few words on thóse which are still employed. Coal well ground, is a popular dentrifice; it is an antiseptic; it is less used than formerly, still they prepare it in our drug stores; its action is nearly useless on the enamel—its constant use ends by causing the teeth to appear black, and the gums as afflicted with scurvy. This applies also to burnt crusts of bread, which are used by several persons. Soot has been used for some time, because it was believed that the chimney sweep's teeth were always white—that belief is erroneous. Their teeth appear white because their faces are black—as also is the case with negroes, it is the mere contrast of the colour of their skin. Notwithstanding, the latter possess good, handsome and strong teeth. The use of soot is utterly unclean. Cinchona is a torpid powder, but its taste and colour on the one hand, and on the other its tanning principle, which at length makes the enamel yellow, cannot recommend it as a dentrifice. It has, however, the property of hardening the gums. What I have said of cinchona can also be applied to tobacco.

Salt is by no means injurious, but it determines a considerable secretion of saliva.

Cigar ashes are also in use; that powder is very unwholesome—it is too strong an alkali. Alum, with which we may rank tartaric and oxalic acid, is too strong a powder, unless, in order to use it, we mix it with an absorbing substance having the property of neutralizing its chemical action. We must mistrust those patented liquids and powders, the pompous names of which fill the columns of our newspapers, ornament the corners of our streets, and are used as mile-posts on our country-roads. Remember well, the action of these patented drugs is magic—it is exactly there where lies the evil, because the only dentrifices which can give quickly a shining white ivory-looking appearance to the teeth are acid. The calcareous phosphate, which is the base of the enamel, is dissolved, causing its polish to be removed, and the teeth thereafter are more liable to retain that kind of mucus which previously had a tendency to accumulate on them. They assume an indelible yellow tint, and if you continue to use those compounds, if the acids constituting their bases are too concentrated, they will soon uncover the gelatinous substance of the teeth, which will cause aching, caries, and their extraction will become unavoidable.

The first quality of a dentrifice is to clean the teeth thoroughly and without injury.

"Whatever may be the mode of preparation of those tooth powders," says Dr. Maury, "we must exclude from their composition all substances liable to alter the enamel of the teeth, since those sorts of preparations are to be used only to maintain their whiteness by removing the tartar which gathers on them."

We must also note their action on the gums. Are those conditions observed in the dentrifices offered to the public with the most pompous names? I entertain great doubts about that. It is a mere speculation nowadays, and the voice of interest very often stifles that of humanity.

This induces me to say a few words on an article which each of you, I am sure, possesses—a tooth-brush. The daily use of the brush cleans the teeth and the gums, and saves them from many diseases. Brushes vary a great deal in their form, that is why you must choose them. For children they must be straight and very soft, for adults they must be so much the less hard as the gums are softer. For instance, if you select a hard brush, you erase thus the enamel in some cases, you lacerate and bleed the gums, you uncover the non-enamelled substances of the teeth, they will totter, sensibility will ensue, and afterwards the toothache.

An article everybody should possess is a tooth-pick. It must be used only when a few particles of food are driven between the teeth, which they annoy when they cannot be taken off in spite of the efforts of the tongue; that is the only circumstance when we can rationally recommend the use of a tooth-pick. The teeth and gums should be tormented as little as possible with any instrument.

There is still another error which I must note. It is the use of the end of a penknife as a tooth-pick. By that process a few blades of the enamel are exposed to be cut off, and unfortunately this does occur, and caries act in that place. Next, are you always sure that your knife is clean? This is again a very delicate matter, because while cleaning your teeth with that instrument you can wound the gums and bring on an inflammation. The best tooth-picks are not those made from gold, silver, or steel, but those which are manufactured from quills.

Formerly sponge and cotton plugs were used for cleaning the teeth—this habit was far from being suitable for keeping the mouth clean—they had the same disadvantages as the linen of which I have already said a few words. Independently of the hygienic care required by the teeth, there are some other precautions to be taken in order to preserve the beauty and soundness of those organs, and those precautions consist in avoiding carefully all that is injurious or may become so. As there are many I shall select the most remarkable, and I will be as brief as possible.

1st. You must avoid washing your head in water too cold or too warm, using those astringent and caustic remedies to remove freckles, or dying the hair.

2nd. Not to break with your teeth too hard objects, or cutting threads or any other thing with the incisive teeth, for they become notched and decayed.

3rd. Never leave particles of food in these organs, nor use too hard dentrifrice powders, elixirs, or tinctures too much acidulated.

4th. While eating avoid taking food or beverages too warm or too cold, because the sudden transition between those two extremes is always injurious to the teeth. *Frigidus inimicum dentibus*, said Hippocrates with reason. When you smoke a pipe or cigar the mouth is warmed, the larynx becomes dry, and then you drink—and even sometimes very cold water, that may cause a slight inflammation of the dental pulp.

5th. Be very careful when drinking mineral waters, for they can irritate them, render them painful, make them turn yellow, and give them a dark covering.

Abstain from sweet things: a proof that they are injurious is that I have met in my practice confectioners, still young, whose teeth were nearly all carious. Druggists come under the same heading, because frequently they are obliged to taste their preparations, acid or sweet.

A thing that is very often done and about which we are careless, is drinking in the same glass as another, or smoking from the same pipe—that is far from being clean. It occurs often that an impure saliva left on the edge of a glass poisons those who drink from it afterwards. Sailors are less particular when their officer calls them while they are enjoying a *chew*, they do not mind handing it to a comrade who masticates deliciously before returning it to its proprietor.

6th. Do not be great lovers of crackers and biscuits, they always contain acid powders. Americans have generally very bad teeth—we may say that they are the greatest biscuit eaters of the world.

7th. Abstain as much as possible from the use of gaseous waters, such as soda, which is relished so much in the hot season—it is acid, since it is composed from tartaric acid and bi-carbonate of soda. Salads are unwholesome; notwithstanding, taken seldom and in small quantities, they can stimulate appetite and facilitate digestion.

8th. Feats of strength performed with the teeth are absurd; those who indulge in them ought to be punished. The loss of a tooth is a real misfortune, since it cannot be repaired. A tooth is worth a diamond, says one of our authors. Remember these few words, and put them in practice, and when old age comes your teeth will still be handsome. If you do the contrary your cheeks will sink in, your lips will lose their firmness and embrossment, your chin will be lengthened, wrinkles will cover your face as so many furrows, pronunciation will be difficult and unpleasant, the saliva, having no more dykes to contain it, will escape, and produce that unpleasantness which we hardly endure in old persons.

In a recent discussion at the Odontological Society, the notion was thrown out, that the teeth have a higher office than that commonly assigned to them—namely, that of merely crushing or masticating the food. They are to be regarded as endowed with a tactile sense, a discriminating faculty, correspondent to that possessed by the muscles and nerves of the eye and ear. Teeth, it was remarked, have an extreme delicacy of discernment, both as to whether the objects comminuted be suitable as food, or such as will irritate the delicate lining of the œsophagus. How speedily do the teeth detect the smallest particle of cinder that has found its way into a freshly baked biscuit! And yet both are pulverized with much the same force and sound.

Trade Memoranda.

Mr. Edward Brown has commenced business as pharmaceutical chemist at Saltisford, Warwick.

The partnership between Percival Henry Smith and Edgar Rayner Smith, chemists and druggists, of Eccleshall and Gnosall has been dissolved.

John C. Coles (late manager for Mr. J. Summer, Coleshill,) has succeeded to the business, carried on for thirty-three years by Mr. Gould, Chippenham, Wilts.

We are informed that Messrs. Moor and Baly, of Saltisford, Warwick, are now in full working order at the plaster business which was so long carried on by Mr. Moor, at Leicester.

Our readers will notice the announcement in our advertising pages that Messrs. Orridge and Co., chemists' valuers, have removed from 32, Ironmonger-lane, to 89, Cannon-street.

Mr. Ruston, of Maryport, has introduced a pleasant orangeade, as a beverage during the cholera season. The formula which has been submitted to us with a sample shows it to be an excellent preventive of diarrhœa.

On this date, Mr. J. H. Whitby, the proprietor of Messrs. R. B. Ede and Co's old-established perfumery business, enters on new and handsome premises at 6, Worship-street, Finsbury, where he will be able better to display the specialities which have made this house famous.

The *Homœopathic Review* states that the supply of the Mississquoi waters to this country has ceased, the local demand at Vermont being itself greater than the supply. Under these circumstances, we learn that Messrs. Burrow, of Malvern, have commenced the manufacture of an artificial water corresponding to the analysis of one of the springs. The Mississquoi waters have been extolled in America, as a remedy in cases of cancer.

Pitt and Co's Annual Treat.—This old firm, famous for the manufacture of tonic and mineral waters, gave their usual treat to the workmen in their employ on Saturday last. The company, about sixty in number, left the works at an early hour in five pair-horse vans, preceded by an efficient brass band. The route, selected for its picturesque scenery, led to the "Robin Hood" Hotel, Cross-roads, Loughton, Essex, where the party sat down to a capital dinner, the moors (in addition to an ample supply of good things) contributing their share of grouse. On the removal of the cloth, the usual loyal toasts were given and warmly responded to. The health and continued success of the "firm" followed, which was neatly acknowledged by Mr. Sprules, the manager, and terminated by three hearty cheers; subsequently the company betook themselves to various out-door enjoyments, with a zest peculiar to the English character, and permeated by harmony, liberality and goodwill. Later in the day tea was served, and shortly after the homeward journey commenced, the works being reached about eleven o'clock. Just previously however, the neighbours and friends of the firm had illuminated their houses, to show their respect and to welcome the return of the excursionists. The company soon after separated, having spent a day replete with unalloyed enjoyment.

POISONINGS.

POISONING BY A LOTION OF CORROSIVE SUBLIMATE.

An inquest was held at Chippenham, on the body of Harriott Maria Fowler, daughter of Mr. R. N. Fowler, M.P., who died on the 1st inst., aged nine years. The child had a ringworm, and had been prescribed for by Dr. Edward Evan Meeres, of Melksham. On the 28th August, after having prescribed other medicines, Dr. Meeres applied a liquid from a bottle with a small brush, and cautioned the deceased not to open her eyes. He said if a little ran down her neck it did not matter. Some of the liquid ran down the neck behind the ear. The application gave the deceased no pain at the time. The nurse brought her home in an open dog-cart almost immediately. During the journey she suffered great pain, and she appeared in great pain after reaching home. The nurse applied cold cream and cold water to her face, but did nothing more until Dr. Meeres had seen her again the same evening. He seemed surprised to see how much the head and face were swollen in so short a time. Deceased continued in great pain all night. The next morning they sent for Dr. Meeres, and he ordered cold water pads to be applied over the eyes and forehead. He was asked if there was any danger, and he assured them there was not. Deceased still got worse, and they told Dr. Meeres they should have further advice. They telegraphed for Mr. Gore, of Bath. Mr. Gore and Dr. Meeres saw deceased, who gradually got worse, and died on the Friday morning. Dr. Meeres requested permission to make a statement on oath to the jury, as he thought himself the person best acquainted with the case, and most deeply interested in putting the whole of the facts candidly before them. He was cautioned by the coroner as to the possibility of any statements he might make being used as evidence against him. He then said that on that day fortnight the deceased was brought to him at his house. She was then suffering from ringworm. At first he gave her a tonic, and a lotion to wash the hair. As it seemed to spread, he ordered the head to be shaved, and the previous treatment was continued until last Monday, when he found the ringworm was spreading over the head. He requested her to be brought to him in the afternoon, for the purpose of using some application to destroy the ringworm, which was a sort of fungus in the skin. On the Monday when she was brought to him he applied, with a brush, a solution of bichloride of mercury, commonly called corrosive sublimate. The formula was taken from Dr. Tilbury Fox's work on skin diseases. He took the book to the chemist, Mr. Laine, of Melksham, and ordered him to make up the prescription according to the formula given therein. The mixture was made specially for this case on the Monday, and the strength was ten grains to the drachm, or eight grains to the ounce, dissolved in alcohol. The effect of this application was always to blister, and it was intended to do so. According to Dr. Fox it was never absorbed into the system, but the effect was always local. In the present case, unfortunately, the mixture by some means got into the system and produced salivation. He had on some previous occasions used the same application, which he made up himself. He was present when the chemist made up the mixture, and he saw the ingredients weighed out, and gave him the printed formula to go by. There were some scratches about the forehead of the deceased which he avoided in applying the lotion. He was satisfied none went into the abrasions, but if it had, no ill effect would have followed, as the effect of this strong application was to coagulate the blood at once He knew it would cause a blister, but he had no recollection of having told the nurse that if some went on to the neck of the deceased it would not matter. If it had gone into the eye it would probably have blinded it. The previous lotion was quite innocuous, and was given merely for the purpose of cleansing the head. He continued to attend the deceased until her death. On Thursday night he thought the swelling of the mouth was abating. There was no doubt the mercury by some means got into the system and produced the symptoms described. He had applied the same mixture and the same strength to children of about eight years of age. No mercury was given internally in the present case. After clearing the room the jury unanimously concurred in the following verdict:—"That the said Harriet Maria Fowler came to her death on the first day of September instant from the effects of poison caused by a very strong preparation of bichloride of mercury having been applied to the head and neck of the deceased by Dr. Edward Evan Meeres, on the 28th of August last past, whilst under his care for an eruption of the head; and the jury are of opinion that great blame attaches to the said Dr. Edward Evan Meeres." The coroner and jury expressed their condolence with Mr. and Mrs. Fowler on the melancholy occurrence.

On the 9th inst., an inquest was held by the Birmingham borough coroner, Dr. Davies, on the body of a lithographic printer, named Payne, who had died from the effects of laudanum. The deceased complained of being unwell on the 7th inst., and went out and purchased the poison. He drank about two-thirds, and lay upon the sofa. Shortly afterwards he was discovered to be dead. Verdict, died from an overdose of laudanum.

On the 24th ult. a deaf and dumb lunatic, residing at Blackburn, named Alexander Hargreaves, died from poisoning by carbolic acid. The acid had been obtained by deceased's mother, as a disinfectant, and during her absence the imbecile had discovered the bottle, and drank its contents.

A child, named Herbert Reed, was poisoned at Sheffield, on the 1st inst., by his sister giving him in play some laudanum, which was in a bottle, placed in a drawer accessible to the children.

A fatal case of poisoning by misadventure recently occurred at Aston, near Birmingham. A labourer, who had sustained a fracture of his ribs, by a fall from a building, and had sufficiently recovered to be able to walk from his home, proceeded to the surgery of Mr. Hoare, and was given a preparation called "Linctus," for a cough, and a liniment for external application. This latter mixture contained aconite, and this was placed accidentally by Mr. Hoare's assistant in the man's linctus bottle, who carried it home, and before the mistake was discovered had taken a dose of the liniment from the linctus bottle. Two hours afterwards he was dead.

LAW AND POLICE.

SUICIDE OF A CHEMIST AND DRUGGIST.

The Scarborough coroner recently held an inquest respecting the death of Mr. Mark Rainton, chemist and druggist, of that town. For some time past the conduct of the deceased led his friends to believe that his reason had gone, and that he had become insane. On the 30th ult., he inflicted a wound on his throat with a dinner-knife, from the effects of which he died. The jury returned a verdict to the effect that the deceased, while in a fit of temporary insanity, had committed suicide. Mr. Rainton was only twenty-seven years of age.

ROBBERY BY A CHEMIST'S ASSISTANT.

At the Birmingham Police-court, on the 7th inst., Richard Brown, chemist's assistant, Princes-end, was charged with breaking out of the house of Mr. W. Followes, chemist and dentist, Digbeth, Birmingham, and stealing therefrom three pairs of forceps and other dental instruments The young man was only engaged on the 1st inst., and on the Monday following he had absconded. Having missed a number of dental instruments, information was given to the police, and prisoner was apprehended at Tipton. Prisoner pleaded guilty, and was sentenced to four months' imprisonment.

THE BRIGHTON POISONING CASE.

On Friday, September 8th, Christiana Edmunds was committed for trial on the charge of the wilful murder of the boy Barker and the attempted poisoning of Mrs. Beard, Mr. Boys, and Mr. Garrett (chemist). The case has aroused so much public interest that it is unnecessary for us to report it at any length. A letter from Mr. Garrett will be found in our correspondence columns.

At the Nuneaton Petty Sessions, on the 26th ult., Mr. Thomas Iliffe, chemist and druggist, was summoned by the relieving officer for the Atherstone Poor-law Union, for unlawfully and wilfully exposing his servant, Ann Smith, in Atherstone whilst suffering from small-pox, on the 13th ult. The girl had been living in defendant's service for two years, and on the 11th ult. she fell ill, when her fellow-servant, named Sharrod. saw some spots on Smith's arm, and told her to show them to Mrs. Iliffe, who, on seeing them, recommended her to go home. She was sent in a trap to her mother's home at Atherstone, where there were four young children and thirty-one inhabitants in the row where the house was situated. Mr. Bland, solicitor, who appeared for the defence, submitted that the magistrates could not convict his client, as it must be proved that defendant had actual knowledge of the girl being infected with small-pox. The magistrates, after a short consultation in private, said that it was one of those cases in which they had to discharge a duty, though a painful one. They could not help thinking that the girl Smith was unlawfully sent to her parents' home, the defendant having at the time a knowledge of the state she was in. Defendant would be fined £2 and the expenses, £4 1s. 4d. Mr. Bland then made an application on the part of defendant for a case to be submitted to the Court of Queen's Bench on a point of law, as to whether the accused could be held criminally liable for the acts of his servant, which was granted.

On the 30th ult., a man named Henry Liversidge was committed to the sessions at Sheffield for stealing a quantity of soap, emery, and black lead, the property of Mr. Dyson, druggist, of West Bar.

THE MORPHIA POISONING CASE.

At Sidmouth, on August 31st, 1871, Mr. Robert Webber, chemist, was charged before the magistrates with the manslaughter of Mr. William Ellis Wall, at Selcombe Regis, on the 22nd of July last An inquest was held upon the deceased at the time of his death, the report of which appeared in our last issue. The verdict was to the effect that Mr. Ellis had died from an overdose of morphia, but that there was not sufficient proof of culpable negligence on the part of Mr. Webber to justify the jury in convicting him of manslaughter. Communication had since been held with the Home Secretary, and the result was that the local magistrates ordered that criminal proceedings should be taken against the prisoner. The evidence adduced on Thursday stated that on the 22nd of July last the deceased, Mr. Wall, wrote out a prescription for himself and sent it to Mr. Webber to be made up. The first line of the prescription ran, "Solution of the muriate of morphia, half a drachm." The prisoner, by some mistake, of which no explanation was offered, put in a scruple of morphia instead of the quantity ordered, and the deceased, following the instructions on the label of the bottle, drank half the dose. He was immediately seized with symptoms of opium poisoning, and notwithstanding the efforts made by two doctors who were speedily in attendance, he died at half-past 2 o'clock on the following morning, about five hours after after having swallowed the poison. The magistrates committed the prisoner for trial at Exeter Assizes upon the charge of manslaughter.

ACCIDENTS.

FATAL ACCIDENT AT A CHEMICAL WORKS.

Albert Chatelaine, twenty-six years of age, a native of Neufchâtel, Switzerland, and principal chemist at Messrs. Read, Holliday, and Son's chemical works at Huddersfield, died at the infirmary in that town, from the effects of injuries which he had sustained whilst engaged in conducting some experiments at the works. The cause of death was an explosion which resulted from some chemical experiments in which the deceased was engaged. Chatelaine was educated at Wiesbaden College, and was generally considered to manifest promise of future professional ability. He always evinced, it is said, great carefulness in conducting experiments.

NOTES AND QUERIES

Mr. Carrington (*Wincanton*) asks if any reader will kindly communicate his experience as to the best means of removing tenderness prior to tooth stopping. Also, as to the best stopping?

R. C. (*Bow*).—If your perchloride of iron is pure, you will simply need to dissolve it in water, in such proportion that the solution shall be of sp. gr. 1·338, and it will then be a neutral solution, equivalent in strength to the Liq. Ferri Perchlor. B.P., but in the latter there is always an excess of acid.

A. Fraser (*Liverpool*).—Staples' is the United States official process for the morphiometrical assay of opium. The opium is first macerated with five times its weight of water for forty-eight hours, then exhausted with cold water, the infusion evaporated to about eight times the weight of the opium, and about an equal volume of officinal alcohol added; to this an excess of ammonia, previously mixed with alcohol, is added in two portions, after an interval of twenty-four hours; at the end of twenty-four hours the deposited morphia is first washed with a little diluted alcohol, then with water; dried and weighed.

J. R. (Exeter).—Santonin is difficult of solution, but it may be accomplished in the following manner:—

℞	Santonini, in pulvere	... ...	grs. xij
	Sodæ bicarbonatis	... ..	grs. xx.
	Aquæ destillatæ	... ...	f℥iij

Put the soda and water into a flask, keep the fluid near the boiling point, adding, as it disappears, about two grains of the santonin at a time, until the whole is dissolved. Solution is effected in about half an hour, during which time the water is reduced to f℥ij. If need be, reduce by boiling to this bulk, when f℥j. will contain a full dose,—six grains of santonin. If an alkaline reaction be objectionable, neutralize with acetic acid.

We have to acknowledge the receipt of a letter from a large soda-water maker, who gives us some details of his experience in soda-water machinery. We cannot insert the letter in full, but in justice to a provincial manufacturer we may remark that its tone is extremely complimentary to the machines constructed by Mr. N. G. Wilcocks, of Bath.

Too Useful.—A Mississippi farmer recently tried coal-oil as a remedy for potato bugs on his vines, and met with eminent success. It killed bugs, vines, and everything else it came in contact with.

Means to Distinguish Benzol from Benzine.—Pitch is dissolved readily and completely by benzol prepared from coal-tar, whereas benzine, also known as ligroine or petroleum spirit, hardly dissolves the substance alluded to at all.

Creasote in Mercurial Salivation.—This is said to be a very old but very efficient remedy: Creasote ʒss; Sage Tea, one pint, to be used as a gargle every hour, for one or two days. Keep the bowels soluble by the use of saline aperients.—*Oregon Medical and Surgical Reporter.*

Infallible Remedies.—For corns, easy shoes; for bile, exercise; for rheumatism, new flannel and patience; for gout, toast and water; for the toothache, a dentist; for debt, industry; and for love, matrimony. [An American exchange is responsible for the above. We hope the writer is in error with regard to his last-named remedy.]

In our July number we printed some formulæ extracted from the *Pharmacist* which had been adopted by the Newark (U.S.) Pharmaceutical Association. Mr. C. W. Badger, of that city, has kindly written to us, pointing out a mistake which occurs in the formula for Elixir Calisaya. Corrected by him it reads thus:—

ELIXIR CALISAYA.

Cort. Cinchona, flav.		
,, ,, (Calisaya)		℥ss
,, ,, Auranti		
Sem. Coriand.	āā	ʒij
,, *Angelicæ*		
Cocci Cacti		ʒj
Spirits Vini deod		℥xij
Aquæ		℥x
Glycerin	āā	℥v.
Syrupi.		

Reduce the barks, etc., to a moderately fine powder, and pack in a percolator, mix the spirits, water, glycerine, and syrup, adding enough water to make two pints of percolate, to which add twenty grains powdered Tartaric acid, and after standing twenty-four hours, filter.

We also print the concluding paragraph of Mr. Badger's letter, not merely because we esteem the compliment which it conveys, but because it may be useful to some other of our foreign readers:—

"In July, 1870, I subscribed for the Chemist and Druggist, through a news-agent in our city, and paid the moderate price of *six* dollars currency per annum, and had I not received a specimen copy about two months ago, I should have continued my subscriptions at the same rate rather than not to have the paper. Since which time, however, I have sent my subscription to Mr. Sherwood, 85, Liberty-street, New York."

OZOKERIT ON FIRE.

On September 1st a very alarming and destructive fire broke out in the extensive premises of Messrs. Field, oil refiners, situated in Wellington-road, Battersea. An alarm was given at the head-quarters of the Metropolitan Fire Brigade in Watling-street, City, about half-past three in the morning by a police-constable who had seen the flames from Southwark-bridge while on duty there, and the intelligence was soon conveyed by telegraph to the rest of the stations of the Brigade. From the inflammable character of the materials collected in the building the fire spread with terrible rapidity, and the whole premises were soon in a blaze. Those of Messrs. Bowley and Son, candle-makers, in close proximity, were soon involved in the common destruction, and the early hour precluded any hope of assistance in arresting the progress of the fire beyond what was rendered by such of the members of the Brigade, with their engines, as went to the rescue. The flames were visible for miles round, and for some time were reflected in the sky with peculiar effect. The property of Messrs. Field and also that of Messrs Bowley were insured in the Liverpool, London, and Globe offices. Messrs. Field announce that this fire will in no degree interfere with their general business. The premises at Battersea are exclusively used for the manufacture of Ozokerit.

Correspondence

RECENT POISONING CASES.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

Sir,—I shall feel sincerely grateful if you will insert in your columns (which I am sorry to trouble you with) the enclosed letter, which is a copy of one I have sent to the *Pharmaceutical Journal.*

To the Editor of the "Pharmaceutical Journal."

SIR,—As you have admitted into your columns a letter from Mr. J. Schweitzer referring to the "Brighton Poisoning Case," I beg you will, in justice to me, allow me respectfully to ask him if I am to infer that my establishment comes under his designation of a "small" or "back street" shop, and if his remarks respecting such shops have been called forth by the same; if so, I humbly apologise to my fellow-tradesmen in "London" and "other towns" if I have in any way been the cause of bringing upon them either censure or contempt. At the same time, whatever charges of negligence or carelessness in the sale or dispensing of "poisons" the "Brighton Poisoning Case" has brought to light, I hope Mr. Schweitzer will kindly state in an open manner how far he thinks I am implicated.

It is a golden rule that a man should not be condemned without evidence, and a fair opportunity of explanation or justification.

As regards my shop, its situation, extent, position, and arrangement, I cannot believe Mr. Schweitzer ignorant, and I freely offer to him and my fellow-tradesmen the whole for their inspection, and am content to abide their decision.

I really cannot at present see why I am to be made a scapegoat; but if my fellow-chemists think me worthy of my townsmen's contempt, I must bear the infliction with what grace I may.

A little poisoned fruit sent me another time may prove more effectual to

Your humble servant,
ISAAC GARRETT, "Chemist and Druggist."

10, Queen's-road, Brighton.

P.S.—I may here state I have been twenty-five years in the business. All my "poisons" are kept in a distinct part of the shop, in green glass bottles with globular stoppers, and have been so for three years, and every precaution observed by me to prevent mistake either in retail or dispensing. —I. G.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—Will you favour me with a corner for a few remarks upon the letter of Mr. J. Schweitzer, of Brighton, to your contemporary, the *Pharmaceutical Journal*, of September 2nd.

As one of the many chemists who feel hurt at the language used respecting men, who early and late are at the service of the public, and who use, in conducting their business, the precautions which commend themselves to their individual wants, I must protest most forcibly against being branded as careless and unprincipled, by a gentleman whose experience of "small and indifferent places of business" must be very limited, or he would certainly pause before coolly insulting their proprietors. A man's situation is often more of necessity than choice, and in his anxiety to "despise the day of small things," Mr. Schweitzer forgets the possibility of the eminent houses he mentions having sprung from small beginnings. It was an axiom, I believe, of the founder of the Pharmaceutical Society, "that no man was neither to be despised nor neglected because he had a small shop, or lived in a back street," but I suppose Mr. Schweitzer will say, "*Nous avons changé tout cela.*"

Yours obediently,
J. BURT.

WORTHING, *Sept.* 8, 1871.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—It is a painful thing at all times to allude to any misadventure occurring among us whereby a fatal result has arisen, but one cannot deny that such a case teaches a lesson to all in the trade to exercise increased care in dispensing prescriptions.

In reference to what you publish respecting the late poisoning by morphia, I think I am not singular in stating that I feel at a loss to understand how such a circumstance could well arise.

With every respect for the feelings under which Mr. Webber will always labour, and offering him the sincere sympathy of a brother in the trade, would he allow me to suggest the policy of *copying* prescriptions previous to dispensing them. How often excessive doses are detected by that means, and in the case in question a *scruple* of morphia could never have been written down without the mind being impressed by the employment of so large a quantity, particularly as the directions were to be taken *at twice*.

Presuming the bottle to have held two ounces (perhaps three), twenty grains of morphia would have required an undesirable quantity of acid to obtain a *perfect* solution, and in no other state could it be sent out to a patient. We are not informed what kind of solvent was employed. Mr. Webber, if your report be correct, stated to the medical man that instead of putting half a drachm of the solution, he had inadvertently put a scruple; he must then have *weighed* the latter, unless the accident occurred from filling up the bottle with the solution, nearly three ounces of which would, of course, be needed to contain the twenty grains, Mr. Webber's preparation of morphia being one grain to the drachm, as directed by the last Pharmacopœia.

The unfortunate customer appears to have prescribed for himself, but if accustomed to powerful sedatives, is it not rather singular that the dose he intended to have taken should have been only a quarter of a grain? It has always appeared to me to be a matter of regret that the change made in the present Pharmacopœia in the solution of morphia should be what it is. Just as we had got a little familiar with the strength of it, one grain to one drachm, by a species of harlequinade it is changed to half that strength only. This, of course, has nothing to do with the recent accident, but unless some good reasons existed for the alteration, I confess I cannot consider it any improvement.

Yours, F.

Maidstone, August 30, 1871.

THE SALE OF BENZINE.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—Allow us through the medium of your Journal, to call the attention of the trade to the fact that they can now deal in benzine collas and similar articles without the restriction of licence, provided they comply with the following regulations, contained in an Act of Parliament recently passed, viz., the Petroleum Act, 1871. We should not have troubled you with this letter only so little notice has been taken in the journals of the Act, which is of much importance to the trade generally.

"(1.) That it is kept in separate glass, earthenware, or metal vessels, each of which contains not more than a pint and is securely stopped.

"(2.) That the aggregate amount kept, supposing the whole contents of the vessels to be in bulk, does not exceed three gallons."

We are, your obedient servants,
JOHN SANGER AND SONS.

150, Oxford-street, W.

Exchange Column.

REVISED TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the publisher of the CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to "The Publisher of the CHEMIST AND DRUGGIST, Colonial Buildings, Cannon-street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

One 6-gallon Globe Show Bottle, two 2-gallons, six 1-gallon do. Hooper's Medical Dictionary. J. Bordass, Driffield.

"Pharmaceutical Journals," from January, 1868, to April, 1870. H. F., 44, High-street, Sittingbourne.

Lyne Hancock's Patent Chair Back Air Cushion. Perfect. What exchange offered. Cheverton, Tunbridge Wells.

¾ cwt. Crude Litharge. 3½ cwt. Ivory Black. 1½ cwt. Roach Alum. Ching and Wise, Launceston.

Pereira's "Materia Medica," latest edition. Has scarcely been used. Will be sold cheap. Price £2 5s. 42/429.

Bell Metal Mortar and Pestle. Weight 70 pounds. Price £3. 29/429.

10 Vols "Pharmaceutical Journal," 1842 to 1852, for a Chemical Chest. J. Collinwood, Hatton, Preston Brook.

Barlow's Medicine. Electric Machine, nearly new. Cost £2 2s. Offers wanted. Hancock, Chemist, Dowlais, S. Wales.

Stand as Fig. 55 Maw's Catalogue, 33 in. long, 21 in. wide, 22 in. high, £1 12s. 6d., in case on rail. Henry Gambling, Cross, Chichester.

Lense for Photography. About two hundredweight Blue Vitriol, second quality, a little damaged. Jenner, Chemist, Hailsham. Offers requested.

11 Respirators (good as new), cost 20s., for 14s. 11 Felt Chest Protectors, cost 9s. 10d., for 6s. 8 oz. Pot Liebig Co.'s Extract. Carnis, 3s. ½ oz. Elaterium, 7s. 13/429.

About 1 lb. 6 oz. Ext. Colch. Acet. (Bass's), 12s. 6d. 1 gall. Syr. Rhei (Clarke, Bleasdale's make), 10d. per lb. 7 lbs. Ung. Hydrarg. Fort, 14s. 21/429.

Large Metal Mortar, Tincture Press, Photographic Apparatus, Telescope, various Sundries. Gazogene for cash or exchange. Carrington, Wincanton, Somersetshire.

2 dozen Buchan's Sugar-coated Pills, 1s. 1½d. 2 dozen Buchan's Ointment, 1s. 1½d. Price 6s. per doz. Twelve 1-gall. Globe-shape Stock Tincture Bottles. Price 20s. Address, H. Woodward, Chemist, Uttoxeter.

2-gallon swan-neck Show Bottle, 7s. 6d. One 5-pint Gazogene and (two 2-pint, damaged), 20s. 5 boxes Foreign Trabuco Cigars, 13s. 6d. each. Coke Stove, cost 60s., 30s. Beasley's Receipt Book, 4s. 26/429.

Fittings, Fixtures, Stock, 200 Bottles, all sizes, in good condition; two nests of Mahogany Drawers, Glass Cases, Carboys, handsome Show Jars, etc. Alfred Higgins, 159, Goldsmith's-row, Hackney-road.

Barth's Oxygen Apparatus, complete with two 15-gallon Gas Bottles (one full). Cost £7 15s. Only used once. Price £3 10s., or exchange. Cheverton, Tunbridge Wells.

Owen's "Compendium," Receipts and Processes, Pharmacy, Chemistry, Confectionery, Perfumery, Cosmetics, Homœopathy, Essences, Wines, latest Discoveries and Improvements. New impression, 26 stamps. Invaluable. Owen, Chemist, Leytonstone.

A few pounds Liquor Opii Sedativus, at 7s. Muspratt's "Chemistry," £2. "Galloway's First Step in Chemistry," new, 5s. A sweet-toned Violin, with case, and silver-mounted bow, capital condition, £3. Warwick, Chemist, Hartlepool.

2-and 4-gallon Show Globes, 14s. 6d. 1½ do. Tin Still, with Liebig's Condenser, 18s. Cigar Case, 6 compartments, 15s. 1 and 4 doz. Burrow's Soda Water Racks, 8s. 1 and 2 doz. do., 5s. 1 Perfumery Stand for 12 bottles, 8s. J. W. Hardman, Chemist, Leeds.

Two 8-gallon Show Carboys. One 3-gallon do. Two 1-gallon upright ditto. A lot of old patents for Tanner's or Aitkin's Medicine Suppository Moulds. Ferguson's Medium Sized Speculum. Beasley's Pocket Formulary. Address, Wills, Chemist, Richmond.

Twenty stoppered Store Bottles, gilt labels, offers. Pair Show Globes, 15s. Counter Scales, 2s. 6d. Gas Stove, 5s. 3 doz. Violet Ink, 10s. Gas Holder and Retort for Dentist or Laboratory, 40s. Gray's "Supplement," 3s. Cooper's "Surgical Dictionary," 7s. 6d. Fowne's "Manual," 5s. Bateman's "Skin Diseases," with plate, 2s. 6d. "Turner's Chemistry," 3s. 6d. Elliotson's "Physiology," 7s. 6d. Ure's "Dictionary Chemistry," 7s. 6d. Muspratt's "Chemistry," 40s. Y. Z., Stamp Office, Bourn.

An American Ice Cream Soda Water Machine, in white marble, with eight Syrup Taps. Also a No. 2 Geraut and Co.'s Patent Soda Water Apparatus to supply the above, and for bottling soda water, etc., and filling syphons. Both in good condition. Cost £93. To be sold together. 7/429.

Two 1s. 9d. Slaiveur-de-laine. Three 1s. Baxter's Ess. Smoke. Two 2s. 6d. Kitchener's Spice. One 5s. Barber's "Stopping." Judson's Dyes—One 1s. Pink. Four 1s. Mauve. Five 1s. Magenta. One 1s. Blue. Seven 6d. Orange. Three 6d. Canary. Three 6d. Brown. Two 6d. Black. Three 1s. Tobacco Powder. Four 1s. Cuff's Fly Powder. Four 1s. Cuff's Foot-rot Powder. Three 1s. 6d. Cooper's Fly-gall Dressing. Three 1s. 6d. Cowper's Blister. Two 2s. 6d. Taylor's Cough Powders. Two 1s. 6d. Taylor's Golden Ointment. Five 2s. 6d. Burton's Lung-Balls. Ten 6d. and Two 1s. Butter Powder. Six 1s. Fruit Drinks—Granular. 4 Briet's Gazogenes, 2 sizes. 2 gas Stoves. ⅞ oz. Magnesium Wire. 1 Brocksopp's Tea Canister, labelled Agent etc. One 2-gallon Show Carboy. 1 Percolator, tin. 2 Show Glasses, Maw's Catalogue, Fig. A. Cooper's Dip and Apparatus. Four 2s. 6d. Prometheans. Two 15 gr. Chloride of Gold and Sodium. Two ½ pints Perry's Collodion and Iodiser. Offers for above, or any of them, respectfully solicited. Apply to A., 54, High-street, Stroud.

The whole or part of the following patents will be exchanged at half their retail price for other patents in good condition, or any drugs or articles suitable for a Chemist, or 10 per cent. less for cash. The lot for £5:—22 Anderson's Scotts' Pills, 1s. 1½d. 1 Carrington's Pills, 4s. 6d. 1 do. 1s. 1½d. 1 Dixon's Pills, 2s. 9d. 3 Bagley's Ointment, 1s. 1½d. 1 do. 7½d. 3 Hickman's Pills, 1s. 1½d. 1 James's Analeptic Pills, 4s. 6d. 9 Maish's Corn Plaster, 1s. 1½d. 2 Bott's Corn Salve, 1s. 1½d. 3 Allnutt's Fruit Loz., 1s 1½d. 2 Jenner's Absorbent Loz., 2s. 9d. 7 Hayward's Pectoral Loz., 1s. 1½d. 3 Ross' Liquid Rouge, 1s. 2 do. Eyebrow Fluid, 3s. 6d. 1 do. Skin Tonic, 5s. 6d. 1 do. Chiropo, 4s. 3 do. Face Powder, 1s. 3 Virginian Gum, 1s. 1½d. 1 Pulv. Jacob Vir., 2s. 9d. 1 James's Blistering Ointment, 1s. 6d. 1 do. 5s. 2 Perdriel's Blistering Paper, 1 fr. 3 Melhuish's Rheumatic Powder, 1s. 1½d. 3 Sandwell's Issue Plaster, 1s. 1½d. 2 Steedman's Whooping Cough Powders, 1s. 1½d. 3 Betton's British Oils, 1s. 1½d. 2 Burdwood's Tincture, 1s. 1½d. 2 Marshall's Heal All, 1s. 1½d. 4 Heath's Ess. Pennyroyal, 1s. 1½d. 1 Knight's Vegetable Absorbent, 1s. 1½d. 3 Freeman's Bathing Spirits, 1s. 1½d, 1 Gold Paint, 3s. 6d. 3 Penney's Nervine, 1s. 1½d. 1 Oxley's Ginger, 4s. 6d. 2 do. 2s. 9d. 7 Smith's Scouring Drops, 1s. 3d. 2 Moxon's Magnesia, 2s. 9d. 3 Henry's Magnesia, 2s. 9d. 2 Cheltenham Salts, 2s. 6d. 2 Cupiss's Balls, 1s. 9d. 2 do. 3s. 6d. 12 Albespeyre's Papers, 1s. 6d. 1 Wood's Mixture for Sheep, 3s. 6d. 14 Truswell's Toilet Preparations, 2s. 9d. J. C. Nosworthy, Chemist, Barnstaple. Anyone may have the above on approval by paying carriage and giving a reference.

WANTED.

Paraffin Pump in good condition. F. Craven, Batley Carr.

Two Plate Glass Doors for Shop Front. 27/429.

Sheep-dipping compositions. 22/429.

Platform Weighing Machine. 32/429.

An outside Coloured Lamp. State shape, size, price. J. Kenham, Post-office, Birkdale, Southport.

The address of Makers of "Parisian Cough Lozenges," (sold in penny boxes). 8/429.

Squire's Introduction 6th or 7th edition. W., Post-office, Ramsbotham.

The January number (1871) of THE CHEMIST AND DRUGGIST, any reasonable price given. Thos. Brewis, Rothbury.

Mahogany Plate Case, glass top and front, lid to lift up 36 × 15 × 4½. 14/429.

Cabinet of Materia Medica, Lescher's; state price and condition to "Chemicus," Post-office, Codnor, Alfreton.

Good Works on Veterinary Anatomy. Cheverton, Tunbridge Wells.

Watts's "Dictionary of Chemistry," State lowest price. F. Crawshaw, Burnley.

"Selecta e Prescriptis," also half or one dozen syrup bottles, lilac or white stoppered bottles. State price and condition to G. F., 89, Bloomsbury-street, Birmingham.

Latest Editions Pereira's "Selecta," Bentley's "Botany," Cook's "Botany," Royle's "Materia Medica," Attfield's "Chemistry." Price. 3/429.

A Lamp for Shop Front, with Two or Three Bottle Lenses Ruby, with Chemist and Dentist or Surgeon - Dentist. Kuowles, Chemist and Dentist, Lynn.

THE NEW ORDER IN COUNCIL.

THIS new order, after pointing out the powers conferred upon the Privy Council by the Act passed in the sixth year of George IV., cap. 78, and the Sanitary Act of 1866, to make special provision against tho introduction of epidemic disease into the country, declares:—

"Whereas cholera is now prevailing in certain parts of continental Europe with which this country has communication, and it is requisite to take precautions, as far as practicable, against the introduction of that disease into this country:

"Now, therefore, the Lords of Her Majesty's Most Honourable Privy Council, by virtue of the powers in this behalf by the recited enactments or otherwise in them vested, do order, and it is hereby ordered as follows:—

"1. In this order the term 'ship' includes vessel or boat. The term 'master' includes the officer or person for the time being in charge or command of a ship. The term 'cholera' includes choleraic diarrhœa. The term 'nuisance authority' has the same meaning as in the Sanitary Act, 1866.

"2. It shall be lawful for any nuisance authority having reason to believe that any ship arriving in its district comes from a place infected with cholera, to visit and examine such ship before it enters any port, or lands any person or thing in the district, for the purpose of ascertaining whether such ship comes within the operation of this order.

"3. The master of every ship within the district of a nuisance authority, having on board any person affected with cholera, or the body of any person dead of cholera, or anything infected with or that has been exposed to the infection of cholera, shall, as long as the ship is within such district, moor, anchor, or place her in such position as from time to time the nuisance authority directs.

"4. No person shall land from any such ship until the examination hereinafter mentioned has been made.

"5 The nuisance authority shall, immediately on the arrival of such a ship, cause all persons on board of the same to be examined by a legally qualified medical practitioner, and shall permit all persons who shall not be certified by him to be suffering from cholera to land immediately.

"6. All persons certified by the examiner to be suffering from cholera shall be dealt with under any rules that may have been made by the nuisance authority under the 29th section of the Sanitary Act, 1866; or where no such rules shall have been made, shall be removed, if their condition admits of it, to some hospital or place to be designated for such purpose by the nuisance authority; and no person so removed shall quit such hospital or place until some physician or surgeon shall have certified that such person is free from the said disease.

"7. In the event of any death from cholera taking place on board of such vessel, the body shall be taken out to sea, and committed to the deep, properly loaded, to prevent its rising.

"8. The clothing and bedding of all persons who shall have died, or had an attack of cholera, on board such vessel, shall be disinfected, or (if necessary) destroyed, under the direction of the nuisance authority.

"9. The ship, and any articles therein which may be infected with cholera, shall be disinfected by the nuisance authority.

"10. Every person obstructing the nuisance authority in carrying this order into effect, or otherwise offending against this order, shall be liable, on summary conviction, to a penalty not exceeding £20."

TRADE REPORT.

THE increase of our prosperity still continues. The returns for the month of August show the enormous increase of £5,000,000 in the declared value of British exports, and for the eight months of the present year not less than £12,000,000 is declared over the return of last year. The aggregate amount for these eight months exceeds £140,000,000 sterling. It would seem that such immense totals cannot go on increasing for long, but when we reflect on the prospect of development which the British colonies promise, and that as yet these are but in their infancy, we cannot think that English commerce has even yet reached its highest point.

From a Governmental statistical abstract of the trade and commerce of the kingdom during the last fifteen years—which has just been presented to Parliament—we glean some interesting and valuable statistics of our exports of soda alkali, and other articles. In the year 1856, the exports of this alkali from England amounted to 1,405,901 cwts., and had increased in 1860 to 2,049,582 cwts. In the following five years there was also a further augmentation, the exports in 1865 amounting to 2,572,794 cwts.; in 1866 the figures were 2,997,479 cwts.; 1867, 3,164,475 cwts.; 1868, 3.499,587 cwts.; 1869, 3,514,382 cwts.; and 1870, 3,857,140 cwts. It may be also mentioned that in 1856, drugs and other unenumerated chemical products were exported from this country to the value of £509,203; while in 1870, the same exportation had increased to the very material extent of £1,382,786—nearly a million pounds sterling in fifteen years! The exportation of opium, too, from this country, has also considerably increased during recent years, as will be seen from the fact that, while in 1856 it only amounted to 51,479 lbs., in 1870 it reached 150.414 lbs. The value of this exportation was in 1870 nearly £200,000.

In CHEMICALS the general tone is firmness, especially for forward transactions. Quicksilver has risen to £11 again, at which price it remains steady. The supply of this metal being entirely in the hands of the Messrs. Rothschild, it is not possible to ascribe any intelligent reason for the vagaries in its price, except the very practical one that a little extra cash is wanted promptly in their coffers. This movement has of course sent up mercurials on the average 3d. per pound. Bleaching Powder is also again higher, and Quinine shows very manifest symptoms of rising. But the most notable advance has been in Iodine and the preparations therefrom, which have reached a most unusual price. As this to some extent has resulted from speculations, it may hardly be expected to be maintained to the full extent.

There is scarcely any noteworthy change in the DRUG market, if we except the decline in Opium, which we anticipated last month. A fall of 3s. per pound has occurred, and we have good reason to believe that, apart from speculation, there will be little excuse for high rates to rule for this important drug during the forthcoming season. We hear from Calcutta that Shellac is hardly worth the quotation named, but possibly it is little more than nominal. Mace and Nutmegs have advanced, as have also Cardamoms.

OILS.—Linseed has continued scarce. Rape has been in good demand. Only small transactions have taken place in Olive. Large arrivals of American Turpentine have been reported, and the price has declined, but Petroleum is now very firm, at a slight rise.

Monthly Price Current.

[The prices quoted in the following list are those actually obtained in Mincing lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.]

CHEMICALS.

	1871.					1870.				
ACIDS—	s.	d.		s.	d.	s.	d.		s.	d.
Acetic ....per lb.	0	4	to	0	0	0	4	to	0	0
Citric ....per lb.	2	11	..	0	0	2	5½	..	0	0
Hydrochlor. ....per cwt	4	0	..	7	0	4	0	..	7	0
Nitric ....per lb.	0	5	..	0	5½	0	5	..	0	5½
Oxalic .... ,,	0	11	..	0	0	0	8	..	0	0
Sulphuric ...... ,,	0	0¾	..	0	1	0	0¾	..	0	1
Tartaric crystal .. ,,	1	4	..	0	0	1	3½	..	0	0
powdered ,,	1	4	..	1	4½	1	4	..	0	0
Antimony ore......per ton	240	0	..	260	0	360	0	..	400	0
crude ..per cwt	34	0	..	36	0	50	0	..	0	0
regulus.. ,,	47	0	..	0	0	70	0	..	75	0
star .... ,,	48	0	..	49	0	0	0	..	0	0
Arsenic, lump...... ,,	15	6	..	16	0	16	0	..	16	6
powder.... ,,	6	9	..	7	3	7	3	..	7	6
Brimstone, rough ..per ton	160	0	..	0	0	160	0	..	0	0
roll ....per cwt	10	0	..	10	3	11	0	..	0	0
flour.... ,,	12	0	..	13	0	12	0	..	13	0
Iodine, dry ....per oz.	0	0	..	0	0	0	9	..	0	9½
Ivory Black, dry..per cwt.	0	0	..	0	0	0	0	..	0	0
Magnesia, calcined..per lb.	1	1	..	0	0	1	2	..	0	0
Mercury...... .. per bottle	220	0	..	0	0	168	0	..	0	0
Minium, red ......per cwt.	21	0	..	21	6	20	6	..	21	0
orange .... ,,	32	6	..	0	0	31	6	..	32	6
Precipitate, red ....per lb.	3	5	..	0	0	2	9	..	0	0
white .. ,,	3	4	..	0	0	2	8	..	0	0
Prussian Blue ...... ,,	0	0	..	0	0	0	0	..	0	0
SALTS—										
Alum ....per ton	135	0	..	140	0	145	0	..	150	0
powder .... ,,	145	0	..	150	0	160	0	..	165	0
Ammonia:										
Carbonate ......per lb.	0	6½	..	0	6¾	0	5¾	..	0	6
Hydrochlorate, crude, white........ per ton	460	0	..	560	0	480	0	..	560	0
British (see Sal Ammoniac)										
Sulphate ......per ton	400	0	..	420	0	320	0	..	325	0
Argol, Cape ......per cwt	60	0	..	90	0	50	0	..	67	6
France .... ,,	0	0	..	0	0	40	0	..	50	0
Oporto, red ,,	22	0	..	24	0	22	0	..	24	0
Sicily . .. ,,	0	0	..	0	0	32	0	..	40	0
Naples, white ,,	0	0	..	0	0	0	0	..	0	0
Florence, white	0	0	..	0	0	0	0	..	0	0
,, red ,,	0	0	..	0	0	0	0	..	0	0
Ashes (*see* Potash and Soda)										
Bleaching powd..per cwt.	14	6	..	0	0	8	9	..	0	0
Borax, crude .... ,,	25	0	..	40	0	25	0	..	35	0
(Tincal) .. ,,	45	0	..	60	0	45	0	..	60	0
British refnd. ,,	80	0	..	0	0	68	0	..	70	0
Calomel ....per lb.	3	3	..	0	0	2	10	..	0	0
Copper.										
Sulphate ......per cwt.	24	6	..	25	0	23	0	..	24	0
Copperas, green ..per ton	50	0	..	60	0	50	0	..	60	0
Corrosive Sublimate..p.lb.	2	7	..	0	0	2	3	..	0	0
Cr. Tartar, French, p. cwt.	93	0	..	93	6	88	0	..	90	0
Venetian grey ,,	95	0	..	0	0	90	0	..	96	0
brown ,,	80	0	..	85	0	0	0	..	0	0
Epsom Salts ....per cwt.	6	0	..	7	0	6	0	..	7	0
Glauber Salts .... ,,	4	6	..	6	0	4	6	..	6	0
Lime:										
Acetate, white, per cwt.	12	6	..	23		12	6	..	23	0
Magnesia: Carbonate ,,	42	6	..	0	0	42	6	..	0	0
Potash:										
Bichromate ....per lb.	0	10	..	0	0	0	5	..	0	5½
Carbonate:										
Potashes, Canada, 1st sort ......per cwt.	37	0	..	0	0	38	0	..	0	0
Pearlashes, Canada, 1st sort ......per cwt.	46	6	..	0	0	43	0	..	0	0
Chlorate ....per lb.	1	4½	..	1	5½	1	0	..	0	0
Prussiate ...... per lb.	1	6	..	1	7	1	0	..	0	0
red .... ,,	2	5	..	2	8	1	9½	..	1	10
Tartrate (*see* Argol and Cream of Tartar)										
Potassium:										
Chloride ......per cwt.	10	6	..	11	0	14	0	..	0	0
Iodide.......... per lb.	23	0	..	0	0	12	0	..	0	0
Quinine:										
Sulphate, British, in bottles ...... per oz.	7	2	..	0	0	6	3	..	0	0
Sulphate, French ,,	7	0	..	7	6	5	9	.	5	10
Sal Acetos ....per lb.	1	1½	..	0	0	0	10	..	0	0
Sal Ammoniac, Brit. cwt.	41	0	..	42	0	41	0	..	42	0
Saltpetre:										
Bengal, 6 per cent or under ......per cwt.	28	6	..	29	3	20	0	..	30	0
Bengal, over 6 per cent. per cwt.	27	0	..	28	0	27	0	..	28	6
Madras........ ,,	0	0	..	0	0	0	0	..	0	0
Bomb & Kurrachee p.ct.	0	0	..	0	0	0	0	..	0	0
European...... ,,	0	0	..	0	0	0	0	..	0	0
British, refined ,,	32	0	..	32	0	32	6	..	33	0
Soda: Bicarbonate, p.cwt.	14	0	..	0	0	10	6	..	0	0
Carbonate:										
Soda Ash.... perdeg.	0	2¼	..	0	2¾	0	1¾	..	0	2
Soda Crystals per ton	115	0	..	117	6	80	0	..	82	6
Hyposulphite..per cwt.	14	0	..	16	0	18	0	..	0	0
Soda:										
Nitrate ....per cwt.	14	6	to	15	0	15	6	to	0	0
Sugar of Lead, White, cwt.	39	0	..	40	0	39	0	..	40	0
Brown .... ,,	26	0	..	28	0	26	0	..	28	0
Sulphur (*see* Brimstone										
Verdigris .... per lb.	1	0	..	1	2	1	0	..	1	2
Vermilion, English..per lb.	3	4	..	0	0	2	7	..	2	9
China.... ,,	3	4	..	0	0	3	0	..	3	2

DRUGS.

	1871.					1870.				
	s.	d.		s.	d.	s.	d.		s.	d.
Aloes, Hepatic....per cwt.	70	0	..	220	0	60	0	..	160	0
Socotrine .. ,,	120	0	..	280	0	100	0	..	220	0
Cape, good.. ,,	27	0	..	29	0	23	0	..	28	0
Inferior ,,	20	0	..	25	0	17	0	..	25	0
Barbadoes ,,	70	0	..	210	0	80	0	..	220	0
Ambergris, grey........ oz.	25	0	..	30	0	25	0	..	30	
BALSAMS—										
Canada .... per lb.	2	0	..	0	0	1	0	..	0	0
Capivi .... ,,	1	9	..	1	11	1	7	..	1	9
Peru .... ,,	9	3	..	8	6	9	9	..	10	0
Tolu .... ,,	1	10	..	1	11	2	3	..	2	6
BARKS—										
Canella alba ....per cwt.	15	0	..	25	0	19	0	..	32	0
Cascarilla.. .... ,,	20	0	..	37	0	18	0	..	32	0
Peru, crown & grey per lb.	1	3	..	2	10	0	10	..	2	4
Calisaya, flat ,,	3	2	..	3	4	8	4	..	3	6
quill ,,	3	2	..	3	4	3	4	..	3	7
Carthagena ,,	0	10	..	1	8	1	0	..	1	9
Pitayo .... ,,	0	10	..	1	6	0	10	..	1	6
Red .... ,,	2	0	..	7	3	1	6	..	5	6
Bucho Leaves ...... ,,	0	4	..	1	0	0	8	..	0	6
Camphor, China.. per cwt.	70	0	..	72	6	70	0	..	71	0
Japan ,,	75	0	..	0	0	70	0	..	75	6
Refin Eng. per lb.	1	3	..	0	0	1	2½	..	0	0
Cantharides ...... ,,	5	0	..	0	0	3	11	..	0	0
Chamomile Flowers p. cwt	40	0	..	60	0	40	0	..	72	6
Castoreum .... per lb.	3	0	..	30	0	3	0	..	30	0
Dragon's Blood, lp. p. cwt.	100	0	..	210	0	90	0	..	200	0
FRUITS AND SEEDS (*see also* Seeds *and* Spices)										
Anise, China Star pr cwt.	125	0	..	0	0	110	0	..	117	6
German, &c. ,,	41	0	..	47	0	25	0	..	40	0
Beans, Tonquin .. per lb.	0	9	..	1	6	0	9	..	1	4
Cardamoms, Malabar good ,,	9	6	..	10	2	9	6	..	11	0
inferior ,,	7	6	..	9	9	7	6	..	9	0
Madras ,,	3	6	..	9	2	5	6	..	9	3
Ceylon ,,	3	1	..	3	4	2	8	..	3	3
Cassia Fistula.. per cwt.	12	0	..	30	0	16	0	..	35	0
Castor Seeds .. ,,	10	0	..	12	0	10	0	..	12	0
Cocculus Indicus ,,	18	0	..	20	0	16	0	..	19	0
Colocynth, apple.. per lb.	0	3	..	0	6	0	4	..	0	8
Croton Seeds .. per cwt.	72	6	..	78	0	70	0	..	76	0
Cubebs .... ,,	25	0	..	26	0	27	6	..	32	6
Cummin........ ,,	48	0	..	55	0	40	0	..	60	0
Dividivi .... ,,	12	0	..	14	6	12	0	..	14	0
Fenugreek...... ,,	13	0	..	22	0	12	0	..	15	0
Guinea Grains .. ,,	22	6	..	23	6	26	0	..	30	0
Juniper Berries ,,	15	0	..	15	6	10	6	..	0	0
Myrobalans .... ,,	12	0	..	0	0	8	6	..	15	0
Nux Vomica.... ,,	11	0	..	0	0	9	0	..	13	0
Tamarinds, East India ,,	2	0	..	12	0	10	0	..	16	0
West India, new ,,	10	0	..	27	6	10	0	..	17	0
Vanilla, large .... per lb.	30	0	..	41	0	32	0	..	37	0
inferior ,,	12	0	..	28	0	25	0	..	30	0
Wormseed per cwt.	0	0	..	0	0	35	0	..	0	0
Ginger, Preserved, in bond (duty 1d. per lb.) per lb.	0	6	..	0	10	0	6	..	0	8
Gums (*see separate list*)										
Honey, Chili .... per cwt.	43	0	..	57	0	32	0	..	46	0
Cuba .... ,,	27	0	..	42	0	22	0	..	36	0
Jamaica.. ,,	36	0	..	53	0	31	0	..	52	0
Ipecacuanha .... per lb.	5	1	..	5	2	4	6	..	5	0
Isinglass, Brazil . ,,	2	6	..	4	5	3	1	..	4	10
Tongue sort ,,	3	4	..	5	7	3	4	..	5	2
East India ,,	1	6	..	4	1	1	9	..	4	2
West India ,,	4	0	..	4	4	4	1	..	4	6
Russ. long staple	6	0	..	9	6	5	6	..	8	0
,, leaf ,,	3	6	..	6	6	3	0	..	5	6
,, Simovia	2	0	..	3	6	1	6	..	2	6
Jalap, good ...... ,,	1	8	..	3	2	1	8	..	3	0
infer. & stems ,,	0	6	..	1	7	0	6	..	1	6
Lemon Juice ... per degree	0	1	..	0	1	0	1	..	0	1½
Liquorice, Spanish per cwt.	35	0	..	37	0	0	0	..	0	0
Italian ,,	40	0	..	60	0	40	0	..	60	0
Manna, flaky .... per lb.	3	6	..	4	0	3	0	..	3	6
small...... ,,	2	0	..	2	2	1	9	..	0	0
Musk.............. per oz.	21	0	..	35	0	17	6	..	34	0
OILS (*see also separate List*)										
Almond, expressed per lb.	1	2	..	0	0	1	0	..	0	0
Castor, 1st pale .... ,,	0	4¾	..	0	5¼	0	4¾	..	0	5
second .... ,,	0	4¼	..	0	4½	0	4¼	..	0	4½
infer. & dark ,,	0	4	..	0	4¼	0	4	..	0	4¼
Bombay (in casks)	0	4	..	0	4½	0	4	..	0	4½
Cod Liver ......per gall.	5	0	..	6	0	5	0	..	6	6
Croton............per oz.	0	3½	..	0	4½	0	3½	..	0	4½
Essential Oils:										
Almond ....per lb.	42	0	..	0	0	42	0	..	0	0
Anise-seed ...... per lb.	9	8	..	9	9	7	6	..	7	8
Bay ....per cwt.	65	0	..	70	0	65	0	..	70	0
Bergamot ......per lb.	8	0	..	15	0	8	0	..	15	3
Cajeput, (in bond) per oz.	0	1¾	..	0	3	0	2½	..	0	3
Caraway ....per lb.	5	6	..	6	3	5	6	..	6	3
Cassia .... ,,	4	4	..	8	0	4	0	..	0	0
Cinnamon ......per oz.	1	10	..	3	0	1	0	..	4	6
Cinnamon-leaf.. ,,	0	2	..	0	6	0	2	..	0	6

	1871.			1870.		
Essential Oils, *continued*:—	s. d.		s. d.	s. d.		s. d.
Citronelle ......per oz.	0 1¾	to	0 0	0 2	to	0 2⅞
fine.... ,,	0 2¼	..	0 0	0 2⅜	..	0 2¼
Clove............per lb.	2 4	..	0 0	2 6	..	0 0
Juniper .... ,,	1 9	..	2 0	1 9	..	2 0
Lavender........ ,,	3 6	..	6 0	3 0	..	4 3
Lemon.......... ,	5 0	..	9 6	5 0	..	9 6
Lemongrass ....per oz.	0 2½	..	0 2⅞	0 2⅝	..	0 3
Neroli .... ,,	0 5	..	0 6	0 5	..	0 6
Nutmeg .... ,,	0 4	..	0 6½	0 4	..	0 7¾
Orange..........per lb.	5 0	..	7 0	5 0	..	7 0
Otto of Roses....per oz.	12 0	..	21 0	13 0	..	20 0
Patchouli ...... ,,	3 0	..	0 0	6 0	..	0 0
Peppermint:						
American ....per lb.	12 6	..	14 0	15 0	..	15 6
English ...... ,,	33 0	..	34 0	36 0	..	38 0
Rosemary ...... ,,	1 9	..	2 0	1 9	..	2 0
Sassafras........ ,,	3 0	..	3 6	3 0	..	0 0
Spearmint ...... ,,	4 0	..	16 0	4 0	..	16 0
Thyme.......... ,,	1 10	..	2 0	1 10	..	2 0
Mace, expressed .. per oz.	0 1½	..	0 3	0 1	..	0 2½
Opium, Turkey ...... per lb.	19 0	..	20 0	23 0	..	32 0
inferior ...... ,,	12 0	..	13 0	20 0	..	27 0
Quassia (bitter wood) per ton	60 0	..	70 0	100 0	..	150 0
Rhubarb, China, good and fine ....per lb.	2 0	..	6 4	4 3	..	8 0
Good, mid. to ord. ,,	0 4	..	1 10	0 7	..	4 3
Dutch trimmed ,,	0 0	..	0 0	9 6	..	10 0
Russian .... ,,	0 0	..	0 0	0 0	..	0 0
Roots—Calumba..per cwt.	25 0	..	42 0	27 0	..	42 6
China .... ,,	26 0	..	28 0	25 0	..	35 0
Galangal .... ,,	17 0	..	20 0	16 0	..	18 0
Gentian .... ,,	27 0	..	30 0	25 0	..	26 0
Hellebore ...... ,,	30 0	..	35 0	22 0	..	30 0
Orris............ ,,	65 0	..	80 0	50 0	..	52 0
Pellitory .... ,,	58 0	..	60 0	58 0	..	60 0
Pink...............per lb.	0 9	..	1 3	0 7	..	0 10
Rhatany .... ,,	0 4	..	0 11	0 5	..	0 10
Seneka............ ,,	4 6	..	4 7	2 9	..	3 0
Snake .... ,,	1 4	..	1 6	1 0	..	0 0
Saffron, Spanish .. ,,	35 0	..	44 0	52 0	..	0 0
Salep ....per cwt.	210 0	..	240 0	110 0	..	0 0
Sarsaparilla, Lima per lb.	0 6	..	0 7¾	0 6	..	0 7½
Para.............. ,,	1 0	..	1 3	1 0	..	1 3
Honduras .... ,,	1 2	..	1 7½	1 1	..	1 6½
Jamaica .... ,,	1 7	..	3 0	1 9	..	3 2
Sassafras ....per cwt.	0 0	..	0 0	0 0	..	0 0
Scammony, Virgin ..per lb.	26 0	..	32 0	28 0	..	32 0
second & ordinary ,,	10 0	..	25 0	10 0	..	23 0
Senna. Bombay .... ,,	0 3½	..	0 6	0 3½	..	0 6
Tinnivelly .... ,,	0 3½	..	1 6	0 3¼	..	1 4
Alexandria........ ,,	0 3½	..	1 7	0 4½	..	1 7
Spermaceti, refined.. ,,	1 6	..	1 7	1 6	..	1 7
American .... ,,	1 2	..	1 3	1 5	..	0 0
Squill.............. ,,	0 1¼	..	0 2	0 1¼	..	0 2¼

GUMS.

	1871.			1870.		
Ammoniaci drop ..per cwt.	80 0	..	150 0	100 0	..	120 0
lump .. ,,	55 0	..	75 0	60 0	..	90 0
Animi, fine washed ,,	230 0	..	335 0	300 0	..	340 0
bold scraped ,,	210 0	..	270 0	220 0	..	290 0
sorts ...... ,,	140 0	..	230 0	100 0	..	200 0
dark ...... ,,	85 0	..	130 0	75 0	..	100 0
Arabic, E. I., fine pale picked .. ,,	66 0	..	72 0	70 0	..	75 0
srts, gd. to fin ,,	52 0	.	65 0	60 0	..	68 0
garblings.. ,,	22 0	..	40 0	30 0	..	50 0
Turkey, pick. gd to fin. ,,	160 0	..	200 0	160 0	..	200 0
second & inf. ,,	85 0	..	155 0	85 0	..	150 0
in sorts .. ,,	65 0	..	80 0	70 0	..	90 0
Gedda.... ,,	33 0	..	44 0	38 0	..	44 0
Barbary, white .. ,,	0 0	..	0 0	75 0	..	82 6
brown .. ,,	44 0	..	46 0	63 0	..	68 0
Australian ...... ,,	21 0	..	42 6	20 0	..	42 0
Assafœtida, com. to gd ,,	30 0	..	100 0	30 0	..	90 0
Benjamin, 1st qual. ,,	160 0	..	400 0	280 0	..	440 0
2nd ,, ,,	150 0	..	210 0	140 0	..	200 0
3rd ,, ,,	50 0	..	85 0	50 0	..	90 0
Copal, Angola red ,,	125 0	..	130 0	90 0	..	100 0
Benguela .. ,,	95 0	..	110 0	90 0	..	100 0
Sierra Leone..per lb.	0 2½	..	0 10½	0 4	..	1 3
Manilla ....per cwt.	17 0	..	40 0	30 0	..	50 0
Dammar, pale .... ,,	62 6	..	65 0	65 0	..	75 0
Euphorbium ...... ,,	10 0	..	0 0	13 0	..	14 0
Galbanum .... ,,	200 0	..	260 0	160 0	..	260 0
Gamboge, pckd. pipe ,,	240 0	..	320 0	240 0	..	320 0
Guaiacum ....per lb.	0 9	..	2 10	0 9	..	2 4
Kino..............per cwt.	60 0	..	90 0	60 0	..	140 0
Kowrie, rough.... ,,	16 0	..	35 0	30 0	..	40 0
scraped .. ,,	37 0	..	75 0	42 6	..	100 0
Mastic, picked......per lb.	6 0	..	7 6	7 6	..	8 0
Myrrh, gd. & fine per cwt.	130 0	..	130 0	180 0	..	240 0
sorts......	90 0	..	120 0	90 0	..	175 0
Olibanum, p. sorts	70 0	..	75 0	73 0	..	78 0
amber & ylw.	63 0	..	69 0	63 0	..	70 0
garblings.... ,,	20 0	..	45 0	20 0	..	45 0
Senegal ....per cwt.	67 0	..	85 0	77 0	..	90 0
Sandarac .... ,,	55 0	..	110 0	60 0	..	97 0
Thus.............. ,,	17 0	..	0 0	13 0	..	14 0
Tragacanth, leaf.. ,,	200 0	..	450 0	220 0	..	380 0
in sorts ,,	110 0	..	180 0	115 0	..	210 0

OILS.

	1871.			1870.		
Seal, pale..........per tun	£33 0	..	0 0	£37 0	..	0 0
yellow to tinged ,,	32 0	..	32 10	36 0	..	36 10
brown........ ,,	31 0	..	0 0	34 0	..	35 0
Sperm, body ...... ,,	80 0	..	81 0	83 0	..	84 0
headmatter	81 0	..	0 0	0 0	..	0 0
Oils, *continued*:—	£ s.		£ s.	£ s.		£ s.
Cod .... per tun	34 10	to	0 0	39 0	to	0 0
Whale, South Sea, pale ,,	32 10	..	33 0	36 10	..	37 0
yellow ,,	31 10	..	32 0	35 10	..	36 0
brown ,,	30 0	..	31 0	35 0	..	0 0
East India, Fish ,,	30 0	..	0 0	32 0	..	33 0
Olive, Gallipoli ...... ,,	51 0	..	52 0	49 0	..	0 0
Trieste ...... ,,	50 0	..	51 0	47 0	..	0 0
Levant ...... ,,	48 10	..	49 0	48 0	..	0 0
Mogador...... ,,	48 0	..	0 0	45 0	..	44 0
Spanish ...... ,,	49 10	..	50 0	50 0	..	0 0
Sicily .... ,,	49 10	..	0 0	48 0	..	0 0
Cocoanut, Cochin.. per ton	51 0	..	0 0	43 10	..	0 0
Ceylon .. ,,	38 10	..	0 0	38 0	..	38 0
Sydney ,,	30 0	..	39 0	32 0	..	36 10
Ground Nut and Gingelly:						
Bombay	0 0	..	0 0	0 0	..	0 0
Madras..................	43 0	..	44 0	43 0	..	0 0
Palm, fine	37 0	..	0 0	39 0	..	0 0
Linseed	33 0	..	0 0	30 0	..	0 0
Rapeseed, English, pale ..	45 0	..	45 10	43 0	..	43 10
brown........	43 0	..	0 0	41 0	..	0 0
Foreign pale....	49 0	..	0 0	46 0	..	0 0
brown........	43 10	..	0 0	42 0	..	0 0
Cottonseed	29 0	..	34 10	27 10	..	33 10
Lard......................	50 0	..	52 0	70 0	..	0 0
Tallow	36 0	..	0 0	35 0	..	0 0
Turpentine, American, cks.	36 6	..	0 0	23 6	..	29 0
Petroleum, Crude	0 0	..	0 0	0 0	.	0 0
	s. d.		s. d.	s. d.		s. d.
refined, per gall.	1 6½	..	0 0	1 5¾	..	1 6
Spirit ,,	0 11	..	0 0	1 0	..	1 1

SEEDS.

	1871.			1870.		
Canary ....per qr.	52 0	..	58 0	48 0	..	60 0
Caraway, English per cwt.	0 0	..	0 0	40 0	..	45 0
German, &c.....	0 0	..	0 0	25 0	..	34 0
Coriander	0 0	..	0 0	0 0	..	0 0
Hemp ....per qr.	40 0	..	44 0	44 0	..	48 0
Linseed, English per qr...	0 0	..	0 0	0 0	..	0 0
Black Sea & Azof	58 6	..	0 0	57 0	..	0 0
Calcutta ,,	63 0	..	0 0	62 6	..	0 0
Bombay ,,	64 6	..	0 0	63 0	..	0 0
St. Petrsbrg. ,,	57 0	..	0 0	56 0	..	0 0
Mustard, brown..per bshl.	0 0	..	0 0	0 0	..	0 0
white.. ,,	9 0	..	9 6	0 0	..	0 0
Poppy, East India per qr.	57 0	..	58 0	57 0	..	0 0

SPICES.

	1871.			1870.		
Cassia Lignea ....per cwt.	103 0	..	121 0	98 0	..	112 0
Vera .... ,,	42 0	..	80 0	47 0	..	82 0
Buds .... ,,	125 0	..	135 0	155 0	..	175 0
Cinnamon, Ceylon,						
1st quality ....per lb.	2 8	..	3 8	1 8	..	3 8
2nd do. ...... ,,	2 0	..	3 6	1 3	..	3 2
3rd do. ...... ,,	1 10	..	3 0	1 1	..	2 11
Tellicherry ...... ,,	2 7	..	3 0	2 8	..	3 1
Cloves, Penang.... ,,	1 2	..	1 4	0 11½	..	1 1¼
Amboyna........ ,,	0 4	..	0 6½	0 4½	..	0 5¼
Zanzibar .... ,,	0 2⅞	..	0 3	0 3	..	0 0
Ginger, Jam., fine per cwt.	90 0	..	180 0	80 0	..	0 0
Ord. to good .. ,,	42 0	..	87 0	31 0	..	77 0
African.......... ,,	33 0	..	34 0	27 0	..	27 6
Bengal .... ,,	28 0	..	0 0	26 0	..	26 6
Malabar .... ,,	0 0	..	0 0	23 6	..	27 0
Cochin .... ,,	43 0	..	125 0	30 0	..	110 0
Pepper, Blk, Malabar, per lb.	0 6½	..	0 6⅝	0 5½	..	0 6
White, Tellicherry ,,	0 6	..	0 0	0 9	..	1 5
Cayenne .... ,,	0 9	..	1 6½	0 8	..	1 1½
Mace, 1st quality ..per lb.	4 4	..	4 7	3 1	..	3 9
2nd and inferior.. ,,	3 11	..	4 3	2 5	..	3 0
Nutmegs, 78 to 60 to lb.	3 2	..	4 2	2 8	..	4 4
90 to 80 ,,	3 0	..	3 2	2 3	..	2 7
132 to 95 ,,	2 7	..	3 0	1 7	..	2 2

VARIOUS PRODUCTS.

	1871.			1870.		
COCHINEAL—						
Honduras, black ..per lb.	2 6	..	3 4	2 6	..	3 9
,, silver .. ,,	2 5	..	2 9	2 5	..	2 10
,, pasty .. ,,	2 3	..	0 0	1 9	..	2 2
Mexican, black .... ,,	2 5	..	2 9	2 5	..	2 9
,, silver .... ,,	2 4	..	2 5	2 3	..	0 0
Teneriffe, black....	2 6	..	3 10	2 6	..	4 0
,, silver.... ,,	2 4	..	2 7	2 5	..	2 7
PUMICE STONE ..per ton	120 0	..	150 0	120 0	..	160 0
SOAP, Castile ....per cwt.	35 0	..	0 0	35 0	..	0 0
SPONGE, Turk. fin pkd pr lb.	12 0	..	16 0	12 0	..	16 0
Fair to good .. ,,	4 0	..	11 0	4 0	.,	11 0
Ordinary...... ,,	1 0	..	3 6	1 0	..	3 6
Bahama............ ..	0 6	..	2 6	0 6	..	2 6
TERRA JAPONICA—						
Gambier .. per cwt.	16 0	..	16 3	16 9	..	16 3
Free cubes ,,	18 0	..	20 6	17 0	..	19 6
Cutch ..... ,,	19 0	..	21 6	13 0	..	20 6
WOOD, Dye, Bar ..per ton	£4 5	..	£4 10	£3 15	..	£4 0
Brazil .... ,,	0 0	..	0 0	0 0	..	0 0
Braziletto .... ,,	0 0	..	0 0	0 0	..	0 0
Cam .... ,,	13 0	..	15 0	17 0	..	24 0
Fustic, Cuba...... ,,	7 10	..	8 10	7 10	..	8 10
Jamaica .... ,,	5 10	..	6 15	4 0	..	5 10
Savanilla........ ,,	0 0	..	0 0	0 0	..	0 0
Logwood, Campeachy ,,	9 10	..	10 0	9 10	..	10 0
Honduras ...... ,,	5 10	..	6 10	5 10	..	6 10
St. Domingo .... ,,	4 7/6	..	6 0	5 10	..	6 10
Jamaica .... ,,	4 2/6	..	4 10/0	3 7/6	..	3 15
Lima, first pile.... ,,	3 10	..	10 0	10 0	..	11 0
Red Sanders...... ,,	5 15	..	5 17/6	6 10	..	6 15
Sapan, Bimas, &c. ,,	7 0	..	9 0	7 0	.	9 0